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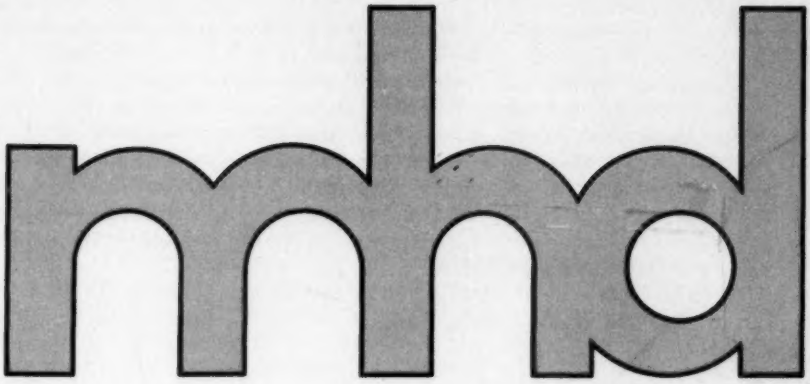

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The *Mental Health Digest* is a monthly publication designed to reflect the whole spectrum of mental health and to present a broad sampling of scientific subject matter and professional points of view. It contains condensations of material selected from the current mental health literature. The condensations are published with the approval of the authors and publishers for use in the *Mental Health Digest* only. Readers interested in particular digests are urged to consult the journal or other source in which the material first appeared or to ask the authors for reprints.

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Growth and Decline

Four and one-half years ago John B. Calhoun and his associates at the National Institute of Mental Health designed an ideal mouse universe in an enclosure 10 feet wide by 10 feet long with food, water, heat, and nesting space for 4,000 mice. Four males and four females placed in the enclosure flourished, raised families, and began a disease-free colony of normal, happy animals.

At the 2-year mark it became apparent that something was drastically wrong. The number of mice was increasing so rapidly that there were no social roles for the young to fill.

Young adult mice ceased the struggle for a territory of their own and were forced to a "life of the streets" on the floor of the universe. Some young mice refused to leave the shelter of their individual nests when they matured. Untouched by the scars of competitive existence, these physically perfect specimens became known to the research team as the "beautiful ones."

Tests were run on the body chemistry of some of the animals to verify suspicions of tensions in one group or lack of it in another. After this study of the breakdown of family life and social order among his mice, Dr. Calhoun predicted that the community was incapable of surviving.

When the population reached 2,200, even though the elements for physical survival remained more than ample, rearing of young and breeding ceased.

Dr. Calhoun reported on his colony in professional journals, and the mouse population came to the attention of science writers for the news media. It was inevitable that the ill effects resulting from the mouse population explosion be compared to those in our burgeoning human population.

As time passed, the remaining animals in the mouse universe became too old to bear young. Today there are only a few females left—all comparable in age to 100-year-old human beings. Now that the last male mouse is dead, the doom of the colony is permanently sealed. In less than 5 years there was the growth and decline of an entire animal society.

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This issue of the *Digest* also is concerned with growth and decline—with developmental processes in human beings. Beginning with a description of the behavior of the fetus in the intrauterine environment, it contains reports and studies of the newborn, the young child, and the adolescent. Research on the phases of adult life shows that there are continual developmental stages throughout adulthood. Finally, with old age comes the decline culminating in death.

The Foetus as a Personality

A. W. Liley

For many centuries interest in fetal life was restricted to anatomical studies by embryologists or to mechanical problems in delivery. The legacies of this era are well-known—particularly the attitude that the fetus was a placid, dependent, fragile vegetable developing quietly in preparation for a life which started at birth. In the present century, many disciplines have extended their interests to include the fetus, but the tendency has been to start with adult life and work backwards—knowing what the adult state was, one worked back to what seemed a reasonable starting point to reach that goal. Thus, there has grown the habit of regarding the fetus and the neonate as a poorly functioning adult rather than as a splendidly functioning baby.

Until recently, the human fetus in situ was inaccessible to study; therefore, much reliance has been placed on animal experiments, and theories have flourished without serious challenge.

Recent advances in fetal diagnosis and therapy have provided both the technology and opportunity to piece together a new picture of the fetus. Far from being an inert passenger in a pregnant mother, the fetus is very much in command of the pregnancy. It is the fetus who guarantees the endocrine success of pregnancy and induces all manner of changes in maternal physiology to make the mother a suitable host. It is the fetus who determines the duration of pregnancy. It is the fetus who decides which way he will lie in pregnancy and which way he will present in labor; and even in labor the fetus is not entirely passive. Much of the behavior of the neonate and infant can now be observed in utero and, by corollary, a better understanding of the fetus and his environment puts the behavior and problems of the neonate in better perspective.

In his warm and humid microclimate, the fetus is in neither stupor nor coma. The few electroencephalographic studies show cyclical activity, the lighter periods of which correspond in the neonate to a drowsy wakefulness. The uterus is insensitive to touch, hence fetal movements are felt in the maternal abdominal wall; therefore, quickening is not apparent until 16 to 22 weeks of gestation. The fetus has been moving his limbs and trunk since about 8 weeks, but some 10 or more weeks elapse before these movements are strong enough to be transmitted to the abdominal wall.

Fetal comfort determines fetal position, but comfort presents no problem in the first half of pregnancy when the fetus inhabits a relatively large and globular cavity. He is under no restriction and has no axis of stability. Normally, however, in the second half of pregnancy, the uterine cavity becomes progressively more ovoid with the lower pole narrower and the fetus elongates more rapidly than the uterus. Therefore the fetus tends to be corralled into a longitudinal lie. However, amniotic fluid volume reaches a maximum at about 28 to 32 weeks, and until this time the fetus is far from cramped. As amniotic fluid volume diminishes and fetal bulk increases from 32 weeks to term, comfort becomes more difficult to achieve. Variations of uterine contour, unusual size or location of the placenta, and the presence of another fetus may all

present further challenges to fetal comfort and ingenuity and produce stable malpresentations. Fetal position, whether he lies with his spine anterior, posterior, or lateral, is determined by such influences as the location of the placenta, the tone of mother's uterine and abdominal wall, the shape of the maternal lumbar lordosis, and the inclination of the pelvic brim. Maternal movement and change of maternal position, Braxton-Hicks contractions, and external palpation all disturb the fetus and may provoke him to seek a new position of comfort. He will repeatedly and purposefully seek to avoid the sustained pressure of a microphone or phonendoscope or of a knuckle on prominences.

The mechanism by which the fetus changes ends in the uterus is simple—he propels himself around by his feet and legs. To change sides he employs a longitudinal spiral roll. Insofar as this is the obvious way to turn over, there would be nothing remarkable about it except that the baby does not roll over until 14 to 20 weeks of extrauterine life. We have unequivocal films of the fetus using this mechanism as early as 26 weeks gestation; apparently the reason we do not see this behavior in the neonate is not because he lacks the neural coordination but because a trick which is simple in a state of neutral buoyancy becomes difficult under the tyranny of gravity.

The very early embryo develops in flexion, but beyond this stage there is little evidence to justify the traditional assumption that flexion is fundamental in fetal musculoskeletal development. In midpregnancy with plenty of room, neutral buoyancy, and intervertebral discs virtually synovial joints, he can assume postures difficult or impossible for the child or adult. In late pregnancy, as the fetus elongates more than the uterus, he must fold to fit in. Commonly the attitude is again one of flexion, but sometimes he elects to lie with neck, trunk, or limbs extended and sometimes grossly hyperextended, a preference he will continue to express as his position of comfort after birth, particularly in sleep.

Fetal movement is necessary for the proper development of fetal bones and joints. The fetus who is severely constrained in utero presents an assortment of compression deformities with severe restriction of joint range of movement.

The realization that the fetus himself determines the way he will lie in pregnancy and present in labor by making the best use of the space and shape available to him puts the practice of version in new perspective. Nowadays few obstetricians assume that they know better than the fetus how he will be most comfortable.

The fetus is responsive to pressure and touch. Tickling the fetal scalp provokes movement, stroking the palm elicits a grasp reflex, and to plantar stimulation the footling breech obliges with an upgoing toe. Being totally immersed, the fetus does not feel wet nor cough or choke with his airway full of fluid. The peripheral sensation of wetness and the irritation of fluid in the airways are dependent on surface tension effects at gas/fluid interfaces, and normally wetness is a new experience at birth. That this experience may be startling for the fetus is suggested by the one recorded case of air amniography where the presence of intraamniotic air led to prolonged loud fetal crying.

Since the fetus lacks an external surface of his own, his temperature inevitably cannot be less than his mother's. The placenta is his heat exchanger, and fetal temperature is normally 0.5—1.5° C above maternal core temperature. If mother runs a

fever, the fetus must also. Although the range of ambient temperature to which the fetus is exposed is limited, his awareness of and reactions to thermal stimulation are intact before birth. If cold saline is run into the amniotic cavity, he shows appropriate motor and circulatory responses.

The fetus responds with violent movement to needle puncture and to intramuscular or intraperitoneal injection of cold or hypertonic solutions. It would seem prudent to consider at least the possibility that birth is a painful experience for a baby. Radiological observation shows fetal limbs flailing during contractions, and if one attempts to reproduce in the neonate by manual compression a mere fraction of the cranial deformation that may occur in the course of a single contraction, the baby protests violently. And yet in all the discussions on pain relief in childbirth only maternal pain has been considered. Judged by the strength of stimuli required to arouse them, the first sleep of neonates is more profound than any subsequent sleep. This is hardly cause for surprise when we know that labor may represent prolonged stimulation and interference with normal fetal activity cycles.

The fetus drinks amniotic fluid throughout pregnancy, and measurement shows that his consumption has an effective rate of interquartile range 15 to 40 ml. per hour in the third trimester. The fetus has a larger number and a wider distribution of taste buds in his oral cavity than the child or adult, and experimental modification of the taste of amniotic fluid produces dramatic results. Fetal drinking rates crash after the injection of an iodinated poppyseed oil which tastes foul to an adult or child and which causes a neonate to grimace and cry. Saccharin generally stimulates fetal swallowing; however, some fetuses drink less after saccharin injection and perhaps they find saccharin in concentration bitter rather than sweet.

Fetal swallowing, especially in the second half of pregnancy, has an important effect on amniotic fluid homeostasis and volume. But what influences or regulates fetal swallowing? The fetus gains nourishment from amniotic fluid, for he digests its constituents. His calorie intake from this source may reach 40 calories per day. Traditionally it has been assumed that hunger is a brand new sensation after birth. But in general, large, well-nourished babies swallow at a high rate and small, grossly malnourished babies at a very low rate. We could suggest that the malnourished child has passed beyond the hunger pangs and into a state of apathy and anorexia. However, the fact that the large, well-nourished fetus has a bulimia and the small, malnourished fetus an anorexia accords with endocrine evidence that much of what has been called placental insufficiency is in fact primarily fetal and of hypothalamic origin.

Fetal hiccups are common and often can be induced by irrigating the amniotic cavity with cold solutions. Fetal hiccups are easily recognized. Mothers should be reassured, for some have misgivings about these episodic series of clonic movements, especially if there is an epileptic somewhere in the family.

The fetus is not only experienced in swallowing, but also in many cases in suckling. The "seeking" or "rooting" reflex is clearly the mechanism by which baby homes on the nipple and underlines the tremendous importance of feeding to the neonate. Indeed his face and mouth are the only part of his body the neonate can reliably

locate in space, and the mouth remains one of the chief tools of exploration in infancy. Since the fetus is often lying with hands and feet in close proximity to his face, he may readily elicit a seeking reflex himself. Accordingly, it is not uncommon in obstetric radiology to detect the fetus sucking thumbs, fingers, or toes, and thumbsucking has been photographed in the 9-week abortus.

Perhaps nowhere does the notion of fetal life as a time of quiescence die harder than in the concept of the pregnant uterus as a dark and silent world. As anyone familiar with a phonendoscope knows, a pregnant abdomen is not silent, and not only can intrauterine illumination be recorded, but the shadow cast by the fetus is detectable.

Flashing lights applied to the maternal abdominal wall produce fluctuations in fetal heart rate. However, the fetus lacks adequate illumination and a worthwhile image for practice in cone or macular vision. At birth he can see but does not know what he is looking at. Confident recognition of familiar people and reassurance from the sight alone of mother takes some 4 to 7 months of extrauterine life to acquire. However, before this age the baby can be reassured by a familiar voice alone in the dark, and we have to argue either that auditory recognition of patterns matures more rapidly than visual recognition, or that auditory experience began earlier. The latter seems more likely.

Sudden noise in a quiet room startles the fetus, and from 25 weeks the fetus will jump in synchrony with the tympanist's contribution to an orchestral performance. By applying intermittent pure tones by hydrophone or air microphone to the maternal abdominal wall, fetal audiometric curves may be constructed by recording the abrupt changes in fetal heart rate. Averaging of fetal electroencephalographic records with repeated stimuli shows sound evoked cortical potentials and demonstrates the fetus is responding directly. Both habituation and conditioning—dare we say learning?—have been noted.

With tympanic membranes damped by fluid in both middle and external ears, the fetus could be expected to have a relative high-tone deafness, but higher frequencies suffer less loss than low frequencies in transmission through tissues and fluid. Therefore, it is probable that with sound, unlike light, intrauterine spectra are similar to extrauterine.

It is not only external sound which bombards the fetus. The pregnant uterus or abdomen is itself a noisy place. The loudest sounds to reach the fetus or an intrauterine phonocatheter are maternal borborygmi peaking to 85 decibels. Below 55 db the content is richer in pattern and meaning—the intermittent voice and the all-pervading bruits, pulsing in synchrony with maternal heart beat, of blood in the great arteries supplying the uterus and placental bed.

Not only do the human eye and ear, therefore, not develop in darkness and silence, but there is also good reason to believe from experimental work and comparative physiology that they would not develop properly in those conditions anyway. As with other fetal organs, development of structure and development of function go hand in hand. And if the function cannot be subserved without the development of the structure, equally the stimulus of the function is necessary for the proper maturation of the structure.

The mechanism by which a concept of sensory space develops has long been a troublesome topic for psychologists, and refined experiment on the

neonate suggests that his sensory space is a little ball. Although he may receive visual and auditory signals from more distant sources, he is not much interested in anything outside a sphere which extends just beyond his toes—a restriction which very neatly corresponds to his recently vacated home.

This then is our picture of the fetus. He does not live in a padded, unchanging cocoon in a state of total sensory deprivation, but in a plastic reactive structure which buffers and filters, perhaps distorts, but does not eliminate the outside world. Nor is the fetus himself inert and stuporose, but active and responsive.

Since on the one hand the fetus is exposed to a variety of stimuli, and on the other hand can sense and respond to them, presumably we have the prerequisites for learning of some sort. Is there in fact any evidence or suggestion that the fetus has learned anything in utero? That recognition by voice precedes recognition by sight is suggestive of fetal learning, or at least imprinting. It is known that physiological rhythms are modified, if not determined, by activity cycles. In this context, it is interesting to reconsider the claim that many neonates do not seem to appreciate that night is a time for sleep.

Consider the performance and restlessness of many pregnant women in bed—with the leg cramps and heartburn, the subcostal and pelvic girdle discomfort, and for variation a trip or two to the bathroom. The neonate could perhaps be forgiven if, as a fetus, he had gained the impression that night was anything but a time for rest.

A similar cri de coeur concerns those young babies who have their briefest rest periods and shortest intervals between feeds in the late afternoon and at dinner time just when it would be most helpful if they would sleep. For the breast-fed baby, a ready explanation arises from the fact that there is a striking diurnal variation in the fat content of human milk—from as high as 9 percent in the early morning to as low as 1 percent in the afternoon. Hence the breast-fed baby may be shortchanged on calories on his afternoon feeds. This pattern may be seen in the bottle-fed baby and the breast-fed baby, and we surmise that the fetus may have been conditioned to the fact that this time of day represents peak activity for mother and peak uproar in many households.

A common question is whether maternal emotion may be communicated to or influence the fetus. Certainly, with monitored fetal hearts, there may be abrupt changes in rate with sudden maternal emotion.

We may not all live to grow old, but we were each once a fetus ourselves. As such we had some engaging qualities which unfortunately we lost as we grew older. We regard the placenta, the fetal circulatory system, and the fetal renal function as superbly adapted to intrauterine life—although they are inappropriate for life after birth. Is it too much to ask therefore that perhaps we should accord also to fetal personality and behavior, rudimentary as they may appear by adult standards, the same consideration and respect?

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On the First Three Subphases of the Separation-Individuation Process

MARGARET S. MAHLER

I have based this presentation upon two thoughts of Freud: The first is that, at the time of his biological birth, the human being is brought into the world in an immature state; hence he is dependent on a mother. The second, probably a result of the first, is that object relationship is the most reliable single factor by which we are able to determine the level of mental health and the extent of the therapeutic potential.

Object relationship develops on the basis of differentiation from the normal mother-infant dual unity, the normal phase of human symbiosis. "Growing up" entails a gradual growing away from the symbiosis, from "one-ness" with the mother. This process is slower in the emotional and psychic area than in the physical one. The transition from lap-babyhood to toddler-hood goes through gradual steps of a separation-individuation process, greatly facilitated on the one hand by the autonomous development of the ego and, on the other hand, by identificatory mechanisms of different sorts. This growing away is a lifelong mourning process, for inherent in every new step of independent functioning is a threat of object loss.

For the normal adult, the experience of being both fully "in" and at the same time basically separate from the "world out there" is taken for granted. It is the result of a slowly unfolding process which takes place in relation to one's own body, and to the primary love object. Although the process extends throughout the life cycle, the principal psychological achievements take place in the period from about the 4th or 5th to the 30th or 36th months of age, a period that we refer to as the separation-individuation phase.

In the course of a pilot study, we noted clusters of variables that repeated themselves in the individuation process. Thus we subdivided the data that we were collecting on the intrapsychic separation and individuation process according to the repeatedly observable referents of that process. Our subdivision was into four subphases: differentiation, practicing, rapprochement, and "on the way to libidinal constancy."

Differentiation

At about 4 to 5 months of age the behavioral phenomena seem to indicate the beginning of the first subphase of separation-individuation—called differentiation. During the symbiotic months, the young infant shows his familiarity with the mothering half of his symbiotic self by the unspecific, social smile. This smile gradually becomes the smiling response to the mother—the sign that a specific bond between the infant and his mother has been established. When inner pleasure continues, and pleasure in the increasing outer sensory perception stimulates outward-directed attention cathexis, these two forms of attention cathexis can oscillate freely. The result is an optimal symbiotic state, out of which smooth differentiation—and expansion beyond the symbiotic orbit—can take place.

Six to 7 months is the peak of the child's hair-pulling, face-patting, manual, tactile, and visual exploration of the mother's mouth, nose, face, as well

as the covered (clad) and unclad feel of parts of the mother's body; and furthermore the discovery of a brooch, eyeglasses, or a pendant attached to the mother.

It is during the first subphase of separation-individuation that infants achieve their first tentative steps of breaking away, in a bodily sense, from their hitherto passive lap-babyhood. They stem themselves with arms and legs against the holding mother, as if to have a better look at her as well as at the surroundings. They like to venture and stay a bit away from the enveloping arms of the mother; if they are able to slide down from the mother's lap, they tend to remain or to crawl near and play at the mother's feet.

Once the infant has become sufficiently individuated to recognize the mother, he then turns to a prolonged visual and tactile exploration and study of the faces of others. He appears to be comparing and checking the features of the stranger's face with his mother's face, as well as with whatever inner image he may have of her. He also seems to check back to her face in relation to other interesting new experiences.

In children for whom the symbiotic phase has been optimal and "confident expectation" has prevailed, curiosity and wonderment are the predominant elements of their inspection of strangers. By contrast, among children whose basic trust has been less than optimal, there may be acute stranger anxiety or periods of mild stranger reaction which interferes with pleasurable inspective behavior. This phenomenon and its underlying factors constitute an important aspect of and clue to our evaluation of the libidinal object, of socialization, and of the first step toward emotional object constancy.

The Beginning Practicing Period

The period of differentiation is followed—or rather, is overlapped—by a practicing period. This takes place from about 7–10 months up to 15–16 months of age. The early practicing phase is characterized by the infant's earliest ability to move away physically from mother; the practicing period proper is characterized by free, upright locomotion.

At least three interrelated developments contribute to and/or interact with the child's first steps into awareness of separateness and into individuation. They are the rapid body differentiation from the mother, the establishment of a specific bond with her, and the growth and functioning of the autonomous ego apparatuses in close proximity to the mother.

It seems that the new relationship to mother paves the way for the infant to spill over his interest in the mother on to inanimate objects, such as a bottle. The infant explores these objects visually with his eyes, and their taste, texture, and smell with his contact perceptual organs, particularly the mouth and the hands. Yet, while there is interest and absorption in these activities, interest in the mother definitely seems to take precedence.

The optimal psychological distance in this early practicing subphase would seem to be one that allows the child freedom and opportunity for exploration at some physical distance from mother. It should be noted, however, that during the entire practicing subphase mother continues to be needed as a stable point—a "home base" to fulfill the need for "emotional refuelling" through physical contact. The wilting and fatigued infant "perks up" following such contact; then he quickly goes on with his explorations, and again becomes absorbed in his pleasure in functioning.

Many of the mothers seemed to

react to the fact that their infants were moving away by helping them move away, i.e., by giving them a push. Mothers also became interested in and sometimes critical of their children's functioning at this point; they began to compare notes, and they showed concern if their child seemed to be behind. Once the child was able to move away some distance, it was as if these mothers began to worry about his being able to "make it" out there. In that context, walking seemed to have great symbolic meaning: it was as if the walking toddler had proved by his attainment of independent upright locomotion that he had graduated into the world of independent human beings. The expectation and confidence that mother exudes that her child is now able to "make it out there" seems to be an important trigger for the child's own feeling of safety and perhaps also for his developing autonomy and self-esteem.

The Practicing Subphase Proper

With the child's spurt in autonomous functions, especially upright locomotion, the "love affair with the world" is at its height. During these 6 to 8 months (from 10–12 to 16–18 months), for the junior toddler the world is his oyster. Libidinal cathexis shifts substantially into the service of the rapidly growing autonomous ego and its functions; the child seems intoxicated with his own faculties and with the greatness of his world.

At the same time, we see a relatively great inperviousness to knocks and falls and other frustrations. As the child begins to venture farther and farther away from his mother, he is often so absorbed in his own activities that he appears to be oblivious of his mother's presence. However, he returns periodically to the mother, seeming to need her physical proximity and refuelling from time to time.

It is possible that the elation of this subphase has to do not only with the exercise of the ego apparatuses, and the body feeling of locomotion in the upright position, but also with the elation of escape from absorption into the orbit of mother. From this standpoint, we might say that the toddler's constant running off, to be swooped up by mother, turns his fear of reengulfment by mother from passive to active. This behavior, also, of course, guarantees that he will be caught, i.e., confirms over and over again that he is connected to mother, and still wishes to be.

Phenomena of mood are of great importance at this stage. Most children in the practicing subphase appeared to have major periods of elation; they became low-keyed only when they became aware that mother was absent from the room. At such times, their motility slowed, their interest in their surroundings diminished, and they appeared to be preoccupied with inwardly concentrated attention, or "imaging." Our inferences about the low-keyed state start from two recurrent phenomena: if a person other than mother tried to comfort the child, he would lose his emotional balance and burst into tears; the child's "toned-down" state visibly terminated at the time of his reunion with the mother. Both these phenomena heightened our awareness that, up to that point, the child had been in a special "state of self." This low-keyedness and inferred "imaging" of mother are reminiscent of a miniature anaclitic depression, and we tend to see in it the child's effort to hold on to "the ideal state of self."

The Subphase of Rapprochement

The third subphase of separation-individuation (from about 16 to 25 months) begins by mastery of upright locomotion and consequently less ab-

sorption in locomotion per se.

By the middle of the second year of life, the infant has become a toddler. He now becomes more aware of and makes greater use of his awareness of physical separateness. Yet there is a noticeable waning of his previous imperviousness to frustration, as well as of his relative obliviousness to the mother's presence. Increased separation anxiety can be observed—a fear of object loss inferred from the fact that when he hurts himself he discovers that his mother is not automatically at hand. The relative lack of concern about the mother's presence is now replaced by active approach behavior, and by a seemingly constant concern with the mother's whereabouts. As the toddler's awareness of separateness grows, he now seems to need and wish for his mother to share with him every new skill and experience. We call this subphase of separation-individuation, therefore, the period of rapprochement.

There is now a quest for constant interaction of the toddler with mother and other familiar adults at a progressively higher level of symbolization. In other words, when the junior toddler grows into the senior toddler of 18 to 24 months, a most important emotional turning point is reached. The toddler now begins to experience the obstacles that lie in the way of his anticipated "conquest of the world." It begins to dawn on the toddler that the world is not his oyster; that he must cope with it very often as a relatively helpless, small, and separate individual, unable to command relief or assistance.

The quality and measure of the wooing behavior of the toddler during this subphase provide important clues to the assessment of the normality of the individuation process. In renewed, active wooing, the toddler's demand for his mother's constant participation seems contradictory to the mother: While he is not as dependent and helpless as he was before, nevertheless he insistently expects the mother to share every aspect of his life. During this subphase some mothers cannot accept the child's demandingness; others cannot face the fact that the child is becoming increasingly independent and separate.

While individuation proceeds rapidly and the child exercises it to the limit, he also becomes more aware of his separateness and employs mechanisms to resist separation from the mother. But mother and toddler no longer function effectively as a dual unit; that is to say, he can no longer participate in the delusion of parental omnipotence. The junior toddler gradually realizes that his parents are separate individuals with their own individual interests.

This is the crossroad that my coworkers and I termed the rapprochement crisis. At this point three basic anxieties of early childhood so often coincide: fear of object loss, fear of loss of love, and castration anxiety. Here, in the rapprochement subphase, is the mainspring of man's eternal struggle against fusion and isolation. One could regard the entire life cycle as constituting a more or less successful process of distancing from and introjection of the lost symbiotic mother, an eternal longing for the actual or fantasied "ideal state of self"—a symbiotic fusion with the mother in a blissful state of well-being.

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Personality Development in Twins—Competence in the Newborn and Preschool Periods

Donald J. Cohen, Martin G. Allen, William Pollin, Gale Inoff, Martha Werner, and Eleanor Dibble

In this report, we explicate some relationships between constitutional or biological adequacy during the first week of life and competence, as assessed by several independent techniques, during the preschool period (ages 3½ to 4½ years).

Research Method

Sample—Twenty-two families referred by obstetricians and Mothers of Twins Clubs were seen for prenatal interviews. The cohort chosen for followup consisted of all eight families with MZ (monozygotic or identical) twins and the first two families with DZ (dizygotic or fraternal) twins, which were included to allow for comparison between MZ and DZ development. This paper focuses on the five oldest pairs (ages 3½ to 4½ years currently), followed from before birth and old enough for nursery school participation: Pairs 1 and 2 (DZ) and Pairs 3, 4, and 5 (MZ). In all five families, both parents were in the home; they were white and middle or upper-middle socioeconomic class.

Longitudinal study—Parents were interviewed during the pregnancy (about their life histories, feelings about the twin pregnancy, and expectations), during the lying-in period (about their immediate responses to the children), and every 2 or 3 months thereafter (about the children's development and family functioning). A research psychiatrist observed the deliveries, assessed the children's conditions during the first week of life, and observed the children at 2- to 3-month intervals at the time of the home visits for parent interviews.

Nurses were interviewed about the children and their notes reviewed. Neurological and pediatric examinations were performed during the first week. Another neurological examination was performed when the children were toddlers. The neurologist assessed general development, and minor differences between the children and examined for neurological signs and symptoms.

Newborn constitution—Constitutional competence during the first week of life was scored by the First-Week Evaluation Scale, FES. Each of six newborn variables is rated from 1 to 5, with a score of 1 indicating a serious problem and a score of 5 indicating normal functioning. The variables are health, physiological adaptation, calmness, vigor, attention, and neurological examination. The sum of ratings in these six areas is the FES. A high score indicates an excellent newborn constitution as demonstrated in the first week of life.

The FES scores were determined by two psychiatrists independently reviewing the reports of each child's first week. There was good agreement between the two psychiatrists' scores for any child, and there was complete agreement between the relative scores assigned to the children in a twinship.

Nursery school—Between ages 2½ to 3 years, the children attended a half-day standardized nursery school session. They came to an attractive, well-equipped nursery school room with their mothers, who were instructed to sit quietly. After a period

of free play, a man and woman teacher separately interacted with the children. The mother then went with one teacher to an adjoining room; the children played freely and then interacted with the other teacher.

The children's behavior was measured and classified throughout the morning by two independent observers seated behind a one-way mirror. In addition, at the end of the session, two other independent observers rated the children's general behavior. Teachers and observers had no previous knowledge of the children. Measures and ratings from different observers were averaged for each variable.

Four types of data were collected: general behavior ratings, e.g. play involvement and vigor; amount of talking; play activities; and attention span.

Rorschach behavior — The Rorschach was administered to each child at 3½ years by an experienced tester with no previous knowledge of the children. The situation was used by the experimenter as a structured technique using a novel task with an adult. The child's general behavior during the testing, and not simply the content of his verbalizations, was rated by the examiner using a Situational-Task Rating Scale that assesses social, emotional, and cognitive functioning, and verbal content only in the sense that it may reflect such variables as the child's style in meeting this novel task. Nineteen variables are rated from 1 to 5, with 1 indicating the worst performance and 5 indicating the best. For example, moving flexibly from one percept to another on the same card and from card to card is rated 5, while rigid perseveration in response to several cards is rated 1. Entering the situation confidently is rated 5; crying and requiring strong encouragement is rated 1.

The Total Rorschach Score is the sum of the scores on the 19 variables of the Situational-Task Rating Scale; the best possible score is 95. The score is a reflection of general development or the overall way in which the child copes with the novel, interpersonal situation.

Developmental testing—Development was formally assessed at ages 3½ to 4½ by another psychologist; the Stanford-Binet was administered and detailed behavioral observations were reported.

Child psychiatric evaluation — A child psychiatrist assessed their social, emotional, and intellectual development at about 3 years of age, and again 1 year later. The children were engaged in play interviews, separately and together. The psychiatric assessment included the children's social relationships, play, speech, motor skills, attention, anxiety, and level of cognitive development.

Family studies—When the children were 3½ to 4½ years old, both parents were interviewed on two to four occasions by a research social worker. The standardized interview included detailed items about the childhood of both parents, the background and course of the marriage, the family's social, emotional, and economic functioning, and the development of the twins.

Results and Analysis

Newborn constitution—The First-Week Evaluation Scale (FES) scores ranged from 15 to 30. The FES variable that best discriminated between High (mean FES 29) and Low (mean FES 16) groups was the most general one, "Health." The High FES group, in comparison with the Low, contained relatively more girls, more first-born children (Twin A), more children who were the heavier of the set,

and more children of vertex delivery. The MZ twins seemed more alike than the DZ: The mean FES difference between the two children for the MZ sets was 6.3; for the DZ sets, 10.3.

Nursery school—The nursery behavior of High and Low FES children contrasted sharply. The typical High FES child talked more and coped better; he was involved with his play, which was original and included mature, structured home-situation themes; he appropriately followed the teacher's suggestions, but was also emotionally expressive and animated. In contrast, the Low FES child was more fearful of strangers and dependent on his mother; his style of play was less well-organized and included more gross play, frenetic activity, and relatively immature, but highly engaging tactile activities (e.g., play with dough and water); he was less able to inhibit his behavior to achieve an end.

Middle FES children (mean FES 25) were intermediate between High and Low FES children on 11 variables. For the remaining variables, they resembled High FES children (painting, originality, vigor, fearlessness, tractability), but had a somewhat longer attention span, less excitability, and more animation.

The five nursery school variables which correlated significantly with FES were coping, talking, play involvement, thematic play, and tractability. Although not statistically significant, fear of strangers and dependency were most strongly inversely related to FES.

On the basis of group means, the variables that best discriminated between High and Low FES groups were talking, thematic play, coping, painting, and originality, in which the High FES children were superior; fear of strangers, dependency, tactile, gross, and disorganized play were higher for the Low FES children.

When one analyzes rank-order correlation between nursery school scores of the entire group of 10 children, several clusters of variables emerge: Coping was positively correlated with animation and expression of feelings, and animation was positively correlated with vigor. Vigor, animation, coping, and originality were negatively correlated with fear of the environment, and coping was negatively correlated with fear of strangers. Play involvement was inversely related to frenetic behavior. These clusters were consistent with the clusters of variables which characterized the High and Low FES children: coping, play involvement, tractability, originality, animation, thematic play for the better endowed; and dependency and fearfulness for the less well-endowed.

Rorschach behavior — The Rorschach situation revealed major differences between the three groups of children. The mean values for the Total Scores of each group were the following: High FES group—87; Middle FES—78; and Low FES—61. The correlation between FES scores and the Total Rorschach Scores was highly significant.

Overall, the High FES children were more competent; their initial response to the examiner and task was more positive. Their speech was more bold, linguistically mature, and well-articulated. They were more playful, motivated, and well-adjusted. The Low FES children were more fearful and perseverated much more. Their behavior was less well-organized and controlled. The Middle FES children were intermediate on 13 variables, better than the High FES on three variables, and worse than the Low FES on two variables.

Developmental testing—When IQ scores for the 10 children were ranked, the High FES children were all in the

top half of the cohort, the Low FES children in the bottom. The mean IQ scores were: High FES children—133; Middle FES—116; and Low FES—101. The psychologist's verbal descriptions were remarkably consistent for FES groups. The High FES children were described as confident, assertive, imaginative, verbal, and social. The Low FES children were described as relatively passive, immature, stubborn, and fearful.

Child psychiatric evaluation—The child psychiatrist's narrative descriptions of the interviews and summary statements about the children's personalities revealed clear personality differences between children in a twinship and between sets of twins. All High FES children were well-developed, mature, outgoing, and imaginative youngsters who were independent and well-organized, without being excessively constricted. Two out of three Low FES children were quite immature, one being very frightened and inhibited, and the other rather silly and flighty. All High FES children had unusually well-developed language skills, without articulation disturbance; all low FES children had speech immaturities, including stuttering, babytalk, and lisping.

The influence of the family environment was most clearly seen in the development of the Middle FES children. One of the four Middle FES children was very similar to his brother in the Low FES group: immature, frightened, and lacking in vigor. Another Middle FES child was unusually poised and verbal, resembling her sister in the High FES group. The other two Middle FES children remained developmentally intermediate.

Family studies—The social worker's evaluations relied on the parents' reports about their lives and the children's development. Her findings were consistent with, and gave shape to, the impressions about family life and the children's development which were derived from the series of psychiatric interviews conducted from the time of the children's births.

Clinical assessment of the families indicated major differences in parental mutuality, maturity, involvement with the children, and style of parenting. From the first months of the children's lives, families reported developmental differences between the twins. High FES children were reported by their parents to be developmentally more advanced and assertive, and Low FES children were described as relatively passive and irritable.

The detailed psychiatric and casework evaluations gave a rich picture of family and personal functioning. These studies indicated ways in which expectations and feelings of parents were responsive to the child's early constitutional competence. Parental attitudes were also importantly shaped by the parents' own life experiences and personality structures, and by the nature of the marriage. In general, differential feelings and attitudes about the two children led parents to behave differentially toward them; and this differential reinforcement, in turn, progressively shaped the children's developing personalities.

Medical history—The Low FES children suffered more frequent and severe illness, and required more hospitalization than High FES children.

Although the sample is relatively small, the findings are convincing because of the longitudinal, in-depth observations; the consistency of results from different techniques of personality assessment; statistical significance of the correlations; and marked differences in means, and absence of overlap between values, for High and Low FES groups.

This longitudinal study of twins and other work with twins lead to the generalization that the better endowed newborn develops into the more secure, trusting, and developmentally advanced child during the first year of life and the more assertive, actively coping, and competent toddler. Family responses interact with constitutional endowment. The attentive and comfortable infant is more easily consoled; he needs and receives less caregiving from his mother, but probably is involved, for this reason, in relatively more mutually satisfying engagement.

The capacity to be easily comforted and remain attentive is associated with the ability to modulate responses to both internal and external stimulation. While the better endowed infant is more attentive to the world, he is also less frightened by sudden changes; he develops a greater trust in his body and in the world, and a less ambivalent relationship with his family. Normal attachments unfold without excessive dependency, and he is less likely to experience upset with strangers or separation. The father gravitates to the child who tolerates his rough play and who is more assertive, e.g., who can grab desired objects held by his sibling. The fortunate child becomes more exploratory and autonomous during the second year, secure in his abilities and relationships. Children and family reciprocally reinforce perception and self-perception of competence (or incompetence), assertiveness (or passivity), and dominance (or submission). But this schema is simplified and requires an understanding of specific environmental factors. At times, mastery or overcoming stress and coping with psychological sensitivities in early childhood may be associated with later developmental assets, such as the capacity for creativity and warm social relations. For the twins we studied, overall competence, coping, assertiveness, and language and social skills characterized the well-endowed child; the relatively less well-endowed child was characterized by his fearfulness and dependency. In general, we have been impressed that cognitive, social, and emotional maturity are closely linked; in a set of twins, one child is likely to be advanced in all spheres. This hypothesis, of course, will need much further testing and elaboration, but is consistent with our research on adult twins, which has demonstrated that the less well-endowed child is more vulnerable to later psychopathology.

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Dilemma of Youth: The Choice of Parents or Peers as a Frame of Reference for Behavior

H. Hugh Floyd, Jr. and Donald R. South

Whose opinion is of greatest concern to the adolescent? What might help to account for variations in "significant others"? Does the relative importance of various "others" change with age and experience? What do differences in orientation to "others" mean for various aspects of personal and social behavior?

An attempt was made at answering these questions by investigating the relative importance of parents and peers as referents for a sample of the youthful population of a southern community. Additionally, there was a concern with isolating some correlates of suspected differences in parent or peer orientations of the subjects.

Research Procedure

Hypotheses—We formulated and tested the following hypotheses: There would be an increase in the peer orientation of youth as they grew older. Males would be more peer-oriented at an earlier age than females, but females would show a marked increase in peer orientation beyond the sixth grade. Parent or peer orientations by the subjects would vary according to their perceptions of source of need satisfaction. Stronger parental orientation was anticipated to be positively correlated with higher socioeconomic ranking.

Subjects—The data were obtained from the total populations of the sixth, eighth, tenth, and twelfth grades in the public school system of a southern community (population 11,000). Respondents numbered 409.

Parent-peer orientation scale—In order to measure the degree to which respondents were oriented toward their peers, relative to their parents, a 20-item scale was utilized. The items of the scale required the subject to indicate the degree of agreement or disagreement with statements which were obviously either parent or peer oriented. Statements concerned three broad categories of activity: dress and taste, identification and decisionmaking, and companionship. Example items include:

"I prefer to wear the kind and style of clothing that my parents suggest, regardless of what type clothing my friends and schoolmates think are best."

"When there is direct conflict between what my parents say should or should not be done, as opposed to what my friends say should or should not be done, I consider more strongly the wishes of my friends."

"I prefer to grow up to be more like my friends rather than my parents."

"I would rather possess those qualities for which my parents would praise me than those for which my friends and schoolmates would praise me."

Scores on the scale were arrayed and then divided into three categories. This procedure placed 27 percent of the respondents in the peer-oriented category, 30 percent in the parent-oriented category, and the remaining 43 percent were mixed or ambivalent in orientation.

Need satisfaction scale—For a measure of the degree to which subjects perceived their needs to be met by their parents as opposed to their peers, a two-dimensional scale was prepared for each item. The first di-

mension was that of the degree of importance of specified needs for the subject. The second dimension was perceived source of satisfaction of these needs. The scoring procedure focused on differences in the source of satisfaction of important needs. Three categories were formed: those for whom parents were the relatively more dominant source of need satisfaction, those for whom peers were more dominant, and a mixed category.

Socioeconomic status—The Duncan Socioeconomic Index was utilized as a measure of social class of respondents. Based on the occupation of the head of the household, each respondent was assigned a score from the index. "High," "middle," and "low" classes were formed from, roughly, thirds of the array.

Findings

Age-grade level and parent-peer orientation—The frequency of parent or peer orientation differed with the age-group level of the subjects, with peer orientation becoming more frequent as grade level increased while frequency of parental orientation declined. For males and females combined, the degree of peer orientation increases until the tenth grade after which there is stabilization or a slight reduction in the degree of peer orientation.

Sex and parent-peer orientation—There was a statistically significant difference in the frequency of parent or peer orientation by sex of respondents. At the sixth grade level males were slightly more peer-oriented. While there was a decided increase in the direction of greater peer orientation for both males and females as grade level increased from sixth to eighth, the increase was greater for females than for males. Thus, at the eighth grade level females were more peer-oriented than were males. From the sixth through the tenth grades, the degree of change toward peer orientation continued to be considerable for males, while for females there was only a slight change beyond the eighth grade. The mean peer-orientation score was actually lower for twelfth than for tenth grade females and only slightly higher for males. This suggests a possible lessened degree of peer orientation with increasing maturity. It also is reasonable to speculate that some of the more peer-oriented drop out of school, thus resulting in a lower mean peer-orientation score for males and females combined in the twelfth as compared to the tenth grade.

Need satisfaction and parent-peer orientation—Significant differences were found in the frequency of parent or peer orientation when source of need satisfaction was the related variable. For example, where parents were perceived as the dominant source of need satisfaction, 50 percent of the subjects were parent-oriented, as opposed to 10 percent who were peer-oriented. By contrast, where peers were viewed as the source of need satisfaction, only 9 percent of the subjects were parent-oriented, whereas 45 percent were peer-oriented. A correlation test applied to these variables indicates a tendency for the most significant referents to be those who are perceived to meet the subjects' important needs to a greater degree.

Socioeconomic rank and orientation—No significant difference was found in orientation toward parents or peers by social class.

Conclusions about Adolescent Psychological Development

Our findings might be explained by several perspectives. The position that males become emancipated earlier and are allowed more independence and

privacy than are females reflects a view that youth will reject parents in favor of peers if controls to the contrary are removed. This assumption could account for the slightly higher incidence and degree of male peer orientation at the sixth grade level.

Perhaps the movement away from parental orientation is not merely a matter of the "brakes" being released but also the result of a "push" from the adult world and/or a "pull" from other youth. Perhaps because of earlier physical maturation and convention the social system encourages a shift from the role identity of child-to-female earlier than it does for the shift from child-to-male. Thus, it would appear that validating a self conception of "femaleness" in much of our society requires affiliation with and feedback from others at an earlier stage for females than for males.

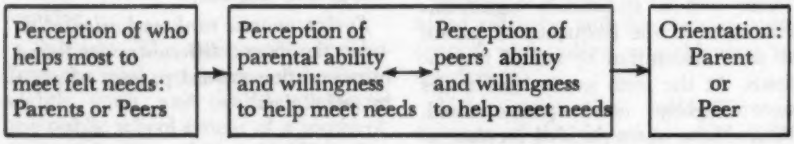
But what of the earlier "peaking" of female peer orientation as compared to males and indeed what of the tendency to revert to parental orientation on the part of twelfth-grade females? Again, we have to assume that the social system functions to encourage youth to shift emphasis from adolescent male and female roles to parental roles. But, again females are socialized in this direction at an earlier age than are males; thus later adolescence is marked by declining peer and increasing parental orientations for both males and females but somewhat earlier for females.

While our findings support a positive association between perceived source of need satisfaction (parents or peers) and the units to which youth are oriented, there were exceptions to this pattern. Some youth (13 percent) who viewed peers as being more capable of helping them meet their needs than were their parents were still "parentally oriented." Likewise some (9 percent) who viewed parents as more capable of aiding in need satisfaction were "peer-oriented."

It is also likely that additional perceptions and calculations intervene between perceptions of who is meeting one's needs and whom one is oriented most strongly toward. Perceptions by youth of parent and peer willingness relative to ability to help meet their needs could be a confounding factor in this relationship. Youth may also calculate that parents are obligated to give them support but figure that they must earn acceptance by peers.

This discussion was intended only to be suggestive of intervening links in the relationship of perceived source of need satisfaction and orientation. Figure 1 summarizes the main features of these relationships.

Fig. 1. Factors Mediating Orientation and Perceived Source of Need Satisfaction


Perception of who helps most to meet felt needs: Parents or Peers
Perception of parental ability and willingness to help meet needs
Perception of peers' ability and willingness to help meet needs
Orientation: Parent or Peer

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The Phases of Adult Life: A Study of Developmental Psychology

Roger L. Gould

In this study the assumptions have been made that people continue to change throughout adulthood and that developmental phases may be found during the adult span of life. Though adolescence has been shown to be a period of dynamic growth, we have not made any significant changes in our conceptualization of the periods of adulthood following the identity struggle of youth. Why do we assume that time no longer functions systematically after 21 years of age? After all, both object and biological changes continue throughout life. In fact, object changes are even more dramatic after 21 than before 21.

In previous studies on adult stages of life, analytic theories bring important clinical insights to bear on the subject and suggest areas for investigations. They lack, however, the base of detailed comprehensive data on the entire adult life span for a large number of people who can be compared on the same axis of measurement. Other investigators have attempted to gather these data through three different approaches: (1) individual biographies; (2) interviews and projective tests with large samples of adults; and (3) studies of specific questions over time—the ages of most mental problems, most hospitalizations, greatest changes in specific functions, greatest contentment, etc.

Study I

We started with a simple descriptive effort. During 1968, all of the patients who were in group therapy at the UCLA Psychiatric Outpatient Clinic were assigned to homogeneous age groups. There were seven groups, composed of the following age ranges: 16–18, 18–22, 22–28, 29–34, 35–43, 43–50, and 50–60 or more. At the end of the first 6 months a second set of seven groups was constituted and observed. These 14 groups were treated by 14 third-year residents as part of their psychiatric training. Each of the 14 groups was observed continuously by one of the study group staff, either as cotherapists or as supervisors via tape-recordings. The 10 study group members (psychiatrists, psychologists, and an anthropologist) met every 2 weeks to report their observations and to make simple comparisons.

We asked each member to characterize the age group he was studying on the simplest and most self-evident level. With the composition of a second set of groups after 6 months, the staff rotated age groups and were able to confirm the observations of their colleagues on new groups. The following summer eight first-year medical students listened to the tapes of the group sessions and picked out the same central and salient characteristics.

In the group aged 16 to 18, we are struck with the theme "We have got to get away from our parents," but without implementary action. They are all safely part of their families and consider themselves more as family members than as true individuals. They see the future as some vague time when they will be liberated, and they have a fantasy conception of what their own adulthood will be like. Their autonomy is precarious, often fortified by negativism, and subject to

erosion from moment to moment. Although they long for deep close relationships with peers, the closeness most often found is instantaneous and unstable and is followed by a temporary rebound back to parents.

In the age group, 18–22, we find a continuation of the theme "We have to get away from our parents," but they feel themselves halfway out of the family and are worried that they will not make it out completely. They are involved in many kinds of implementing actions—living away from home at school, working, paying rent, owning their own cars—but are not quite totally committed to their current time base since it is not quite adult yet. They are especially supportive of each other; the peer group becomes the ally that will help them out of the family. They see their intimates as betrayers if the intimate's way of thinking is not identical to their own or if the intimate cannot perform all of the soothing functions that the family had performed. Their own autonomy is felt to be established but in jeopardy. They perceive a vague feeling that they have to keep a lid on themselves lest anger, fear, or depression escape.

Persons in the 22–28 age group feel established, autonomous, and separate from their families and feel they are adults. They feel that what they are doing is the true course in life, and there is little consideration of whether their general commitments are the right ones or not. They feel their "self" to be well-defined, even if they are not fully satisfied with it. They see their parents as people with whom they still have to prove their competence as adults. Peers are still important but not to be relied on as much as self-reliance. The spouse is seen as a person with whom there is a commitment to make a marriage work. There is a definite feeling that "now" is the time for living as well as growing and building for the future. Extreme emotions are guarded against, and the emphasis is on modulating the emotional tone for adult life.

In contrast, the 29–34 age group is beginning to question: "What is this life all about now that I am doing what I am supposed to?" and "Is what I am the only way for me to be?" Marriage and career lines have been established and young children are growing, but some inner aspect is striving to be accounted for. They feel weary of devoting themselves to the task of being what they are supposed to and just want to be what they are. There is a dawning awareness that their will alone is not all of them, and that inner forces reproduce patterns of behavior and relationships that they don't particularly want to exist but can no longer ignore or will away. They no longer see the necessity to prove themselves and accept parts of themselves as being like their parents. A most poignant desire is to be accepted by the spouse "for what I am." The children are becoming companions and love objects, but parents try not to impose roles on them. This conscious attempt to let their children grow freely is interfered with by a series of confusing temporary identifications with their growing children.

In the age group, 35–43, there is a continued look within and an existential questioning of self, values, and life itself, but with an increasing awareness of a time squeeze. Questions now are, "Have I done the right thing?"; "Is there time to change?". Children are seen as reflections of their parents' worth, and there is uncertainty about control over the children. Their own parents turn more toward them. The sense of time emphasizes the finitude of time and there is an eye toward the past, present, and future

equally. The person looks to the spouse, who is often looking for the same support. Work is looked to as "one last chance to make it big."

In the 43- to 50-year-old group, finite time is resigned to as reality. The "die is cast" feeling is present and is seen as a relief from the internal tearing apart of the immediately previous years even though it is a bitter pill to swallow. They feel their personalities are set and tend to blame their parents for their life problems. They are eager for social activities and friends, but on a superficial basis tinged with negative, competitive casts. They are still actively involved with their young adult children who have emerged and are separate, and they actively look for sympathy and affection from their spouses in a mode similar to that of their former dependency on parents.

In the 50s there is a mellowing and warming up. Their parents are no longer the cause of their problems. The children's lives are seen as potential sources of warm comfort and satisfaction, and they are concerned with their children's happiness in personal terms. They value their own spouses and look within themselves at their own feelings and emotions with a self-accepting attitude and general stability. There is an imminent presence of mortality with a renewed review of one's own work contributions to the world. There is a hunger for unique personal relationships and a concentration on petty annoyances, health topics, and an unexpected guilty shadow about personal sexual views.

Study II

In the second study we wanted to obtain more information on age specificity and on generalizability of the descriptions to non-help-seeking populations.

We constructed a questionnaire in the form of "phase of life" statements that could be administered to a nonpatient population. Eight first-year medical students were presented with all of the tape-recordings of the two sets of "phase of life" groups and instructions to list statements describing personal feelings that stood out during the tape-recorded sessions. A compilation of these statements from all the age groups was then organized into topical sections which were arrived at from the content of the statements. We included 16 statements in each topical section in order to have a forced-choice ranking format.

The eight sections were sense of time; relationships to parents, friends, children, and spouses; feelings about own personality, job, and sex. We also asked subjects to rank order a list of major concerns in life and to rank order the importance of the major people in everyday life in regard to companionship, approval, decision-making, and general influence.

The questionnaire was given to 524 middle-class educated whites who were not psychiatric patients. Our final sample included 20 subjects for each year between 16 and 33 and 20 subjects for each 3-year span between 33 and 60. The male-female ratio was approximately the same for the total sample but was unevenly distributed, with women being disproportionately represented over age 45.

Each subject rank-ordered statements in each section from one to 16. Curves for each statement were plotted on the basis of the average rank ordering for the 20 subjects at each age. There were 142 scores for each age between 16 and 60, and 142 curves were developed from these scores. Each age-point on each curve therefore represents the average rank order of 20 same-aged subjects for

that statement relative to the other 15 statements in its section.

By putting all of the curves on a single type of graph, we were able to see when the greatest number of statements changed rank order. The bulk of the responses stabilized in the period between ages 22 and 29 and remained stable throughout the life span. The stable response curves of this period provide us with a well-established baseline. The responses of the 16- to 17-year olds were almost identical, except in age-inappropriate areas (children, job security, etc.), to the stable patterns of those aged 22 to 29. In contrast, the 18- to 22-year-olds responded discontinuously. After 29, the rank order began to change at two ages, 30 and 37. Most of these late-changing curves stabilized at around age 43. Less impressive fluctuations occurred at the end of the fourth decade. Seven distinct age periods are suggested: 16–17, 18–21, 22–28, 29–36, 37–43, 44–50, and 51–60.

To look at the content of the statements with changing scores between 16 and 60, we graphed each topical section individually. Several of the curves lend weight to our clinical observation of the groups and add a knowledge of age specificity that we did not have. Graphs show the age period of the 30s is a time of active psychological change. There is a gradual peeling away of the illusions of omnipotence and omnipotentiality, and there is an identification of the self with the family. In the 30s time becomes finite while a reconciliation with the limitations of being mortal involves work choice, the sense of well-being, money resources, and the deterioration of some general abilities.

Between 40 and 43 there is indication of an acutely unstable period with a great deal of personal discomfort. In addition to the return to baseline on these statements at 43, there is a general stabilization and leveling off of the changes started in the early and mid-30s. Marital happiness and contentment with the spouse continue to increase, along with a renewed interest in friends and social activities. Concern with one's own children continues at a very high level.

In the 50s one begins to feel less responsible for one's children and begins to look for the children's approval and the spouse's approval. The concern with health increases, and the certainty that time is running out is reflected.

The results presented here describe sequence of process fluctuations that define the posturing of the self to its inner and outer world over time. The fluctuations are time-dominated, but not necessarily age specific for any one individual. In addition, the fluctuations take place within the context of a total personality, life style, and subculture, and each man can be compared only with his own self at a former time. How these shifts are expressed and coped with is a matter of individual psychology.

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Recent Progress in the Psychiatry of Old Age and Its Bearing on Certain Problems of Psychiatry in Earlier Life

MARTIN ROTH

The geriatric problem may in a sense be regarded as a reflection of a society's medical and economic achievements, for it arises essentially from a decline in infantile mortality and a diminution in the toll taken by a wide range of diseases. Every advance in medicine is prone to increase the proportion of those who survive into old age; the geriatric problem is the price that has to be paid for those advances.

Late life mental disorders display certain problems in sharp relief. Advances in geriatric psychiatry would, therefore, be likely to have significant implications for the exploration of mental disorder in earlier years. But in their own right mental disorders in old age demand both services and long-term scientific effort.

Two groups of maladies seriously impair the quality of life in old age—chronic physical ill health and chronic mental deterioration.

The Association Between Affective Disorder and Physical Illness in Old Age

Physical illness may contribute to the causation of affective disorder in a number of ways. The associated pain, immobility, and generally debilitating effects could be expected to give rise to depression and anxiety, but it has become plain that there are many findings not to be explained in terms of a reaction to physical disablement or decline. Although evidence does not favor a primary psychological causation for physical disorders observed in association with affective disorder among aged people, the possibility that the matter makes some independent contribution to the increased mortality remains and requires independent investigation.

Quantitative Psychological and Post Mortem Studies in Demented and Well-Preserved Elderly Subjects

Two main interconnected questions have dominated recent work in the area of the senile and presenile degenerative disorders: The first concerns the relationship between senile dementia and normal senescence. The second is the relevance of the neuropathological changes commonly found in association with senile and arteriosclerotic dementia to the progressive decay of intellect and personality characteristic of these disorders.

An investigation directed toward these problems was begun in Newcastle about a decade ago. Subjects were patients admitted to general hospitals, geriatric wards, and psychiatric hospitals. A systematic psychiatric examination was conducted on each patient and a diagnosis was made on the basis of predefined symptomatological criteria. Tests were administered to consecutive admissions to certain wards in each of these three types of institution. In an attempt to ensure that the material would contain a substantial group of mentally well-preserved patients, those who had entered hospital for the treatment of somatic disorders were admitted to the study only if judged after a systematic examination to be free from psychiatric symptoms.

Each patient was scored on a dementia scale comprising a list of items relating to competence in personal, domestic, and social activities. Scores

were allocated for partial or complete incapacity in relation to each item, and the total dementia score could lie between 0 (fully preserved capacity) and +28 (extreme incapacity). The second method of quantification was based on scores allocated for the patient's performance in a number of simple psychological tests for orientation, for recent memory, for old memory, and for concentration. In this instance, the results could lie between 0 (complete failure) and +37 (maximum score).

Neuropathological inquiries included studies of brain weight, ventricular size, degree of atrophy, and the extent of ischemic lesions, a standardized technique being used in each case.

For the investigation of the senile types of change, samples of cortex were taken from points in each frontal, occipital, temporal, and parietal lobe. Sections of 25μ thickness were stained by the Von Braunmuhl silver impregnation technique. Plaques were counted in each of five fields selected at random from sections in which the plaques were judged to be relatively uniform in distribution. Counts were made in a total of 60 fields and the mean number of plaques per field were calculated.

The result of the two psychometric tests was expressed quantitatively as "Dementia Score" and "Test Score." A clinical diagnosis was made and each subject was allocated to one of six main categories: affective disorder, late schizophrenia, acute delirious or confusional state, senile dementia, arteriosclerotic dementia, and "no psychiatric disorder." A judgment was made in all-or-none terms as to whether or not the patient was suffering from dementia, that is, a chronic progressive psychosyndrome.

Psychological Impairment and Brain Damage

When we examine the association between scores on quantifiable tests and measures of pathological change, it is found that dementia score correlates significantly with mean plaque count and also test score. The findings were clearly at variance with the views expressed by many workers that severity of intellectual and personality impairment and the extent of pathological change observed in the brains of aged people at post mortem are poorly correlated. However, the possibility that those with an unequivocal senile dementia exhibit pathological changes that are, in some respects, distinct is not excluded by this finding.

When the different clinical groups were compared with normals in respect to mean plaque count and other types of senile neuropathological change, the following picture emerged: Subjects who had been suffering from senile dementia during life were separated sharply from all the other groups by severity of cerebral pathology. Seventy-nine percent of those with senile dementia showed a mean plaque count greater than 11, whereas between 87 and 100 percent of all subjects with physical illness, confusional states, affective disorder, and late schizophrenia had a mean plaque count of 11 or less.

The results in respect to neurofibrillary change reveal a similar picture; 83 percent of senile dements were found to have moderate or severe tangle formation in the cerebral cortex, whereas those in the affective and paraphrenic groups had tangle formation of a lower grade of severity, and approximately 90 percent of subjects with confusional state and uncomplicated physical illness had slight tangle formation or none. Granulovacuolar

degeneration in pyramidal cells of the hippocampus separates the groups in the same sort of way.

The differences between subjects divided according to the simple all-or-none criterion of demented or nondemented reveal the same clear, orderly, and strict relationship between indices of psychological impairment and measures of cerebral pathology.

The material studied to date comprises 89 cases. Twenty-two of these diagnosed as suffering from arteriosclerotic dementia are for the present omitted from consideration; of the remainder, 29 were regarded as exhibiting a definite senile dementia, and 38 as being nondements. Of the latter 18 percent had no plaques, 89 percent had less than 12 plaques, and none had more than 23. In the 29 dements, 79 percent had more than 11, 17 percent more than 23, and 14 percent more than 35. The pattern was similar in respect of neurofibrillary change, moderate to severe change being rare in nondements and almost invariable in those with senile dementia.

The correlations between mean plaque counts and scores on the two psychological measures in the first 26 cases of senile dementia studied are statistically significant for the dementia score, not significant for test score.

Detailed neuropathological comparison of the dements with other subjects reveals certain changes that are more common in senile dements than in other groups of cases. In addition to aggregations, plaques may be distributed through the full cortex; generalized neurofibrillary change is common as also are argyrophile areas. In respect to all these changes, there were many gradations, and moderately demented patients tended to fall between normals and the severely demented. With existing techniques of investigation the differences between senile dements and other subjects appear to be attributable to quantitative gradation of the commonest forms of pathological change found in the brain in old age.

A quantitative technique was utilized for examining the extent of the softening caused by vascular disease of the brain, and a picture emerged that was similar to that described in relation to plaque and other senile changes. The method consisted of cutting the brain into coronal slabs 1 cm in thickness and estimating the total amount of softening visible to the naked eye.

There was a correlation between quantitative estimates of the severity of intellect and personality impairment as reflected in the dementia score and the estimate of the total volume of softening. Taking all groups of physically ill subjects and those exhibiting functional disorder together with persons considered clinically to suffer from dementia arising from cerebrovascular disease, the correlation between dementia score and softening was highly significant statistically. A significant correlation was also found between dementia score and ventricular size.

From this group of observations there also emerges a suggestion that a threshold effect may be at work. Fifty milliliters of naked eye softening proved to be the volume which separated those subjects with a clinical diagnosis of arteriosclerotic dementia, most of whom had more, from subjects clinically diagnosed as free from dementia, who had less.

When all the arteriosclerotic dements and the control groups (affective disorder, late schizophrenia, confusional states, and normals) were taken together, dementia score showed a significant correlation with plaque count, but there was only a negligible

correlation between plaque counts and measures of cerebral softening. And, when an analysis was undertaken of the total amount of variance in dementia scores contributed independently by different measures used, it was found that with six variables under consideration, plaque counts, ventricular size, and volume of softening all made a significant contribution accounting respectively for 14.7, 24.6, and 60.2 percent of the total variance.

The findings suggest independent pathological processes, each closely correlated with the development of dementia and capable, when fortuitously associated with one another, of augmenting each others' effects. Although explanations in terms of some specific qualitative process (not evident in well-preserved aged people) both for senile and arteriosclerotic dements are not wholly excluded, they are rendered rather unlikely by these findings.

General Implications

The severity of psychological impairment and of deteriorated functioning during old age shows a clear, consistent relationship to quantitative measures of cerebral damage, with threshold effects apparent in plaque counts and in softening caused by cerebrovascular disease.

One of the main implications that emerges from the findings is that, up to a certain point, structural damage that destroys the parenchyma of the brain may be accommodated within its reserve capacity of neurones so that overt evidence of intellectual impairment or personality change does not become apparent. If this is accepted, there are far-reaching prophylactic implications, not only for middle and old age but for all parts of the life span.

The implications extend further back in the life span, for every injury that decreases the brain's population of postmitotic cells can increase the chances that dementia will occur as a result of aging and other factors. Questions arise about the fate of those children who have been discovered to suffer injury, including brain damage, at the hands of aggressive and psychopathic parents. Also experimental laboratory animals that suffer undernutrition during critical phases of development may show permanent deficits in the size and composition of the brain. If the same applies to man, some of the preconditions for senile and other forms of dementia may be created by preventable deficits during early and even embryonic life. The child may be "father to the man" in a new sense.

There is need for more detailed investigation, at all stages of the life span, into the nature of the relationship and the modes of interaction between physical disablement and disease, the psychological implications for the individual, the high prevalence of associated affective disorder, and the bearing of these factors on mortality. Not only do the psychiatric problems of old age present major challenges in their own right for modern psychiatry, but also they offer promising clues for certain leading problems of general psychiatry.

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Social Implications of a Prolonged Life-Span

Bernice L. Neugarten

Eminent biologists have been predicting that the world stands on the brink of a scientific breakthrough in biology that will mean a dramatic prolongation of the human lifespan. What is the import of such reports? What is their significance for biological scientists and social scientists?

Most societies have been preoccupied with the young and with the social mechanisms for inducting the young into adult roles. One reason for this preoccupation is that only recently have large numbers of old people been present; but societal aging is common to all developing nations as the benefits of industrialization, rising standards of living, and advances in science and medicine lead to longer life expectancy. In some countries the appearance of large numbers of old has been relatively sudden, and those societies have been unprepared to meet the needs of large groups of older people. In such countries—and United States is one—a sizable proportion of needy aged exist who create acute problems in the fields of social and medical welfare. In other countries, the historical process has been more gradual, and the needy among the aged appear to be no more numerous than the needy among other age groups.

In all industrialized societies, however, young and old must adapt to multigenerational families, the retirement revolution, and trends toward gerontocracy. In this sense, increased numbers of older persons, whether needy or not, pose major social problems for these societies and their presence leads to new alignments between age groups.

Are generational conflicts increasing in modern societies? If so, are they appearing between the young and society at large? Between the old and society at large? Is a new age-divisiveness appearing? Is the world entering a period of social change in which there is a struggle for age rights? If so, will the struggle be joined by the young and by the old?

Such questions have no easy answers, for the underlying social dynamics are complex. In the United States, for example, resentments against delinquency, student activism, the drug culture, and the counterculture often become uncritically fused into hostility toward the young as an age group. At the same time, there have been new attempts to integrate the young into the society as witnessed by the recent lowering of the voting age from 21 to 18.

Anger toward the old may also be on the rise. In some instances, because power positions in the judiciary, the legislative, the business, and the professional arenas occupied by older people, and because seniority privileges affect workers, the young and middle-aged become resentful. In other instances, as the number of retired increases, the economic burden is perceived as falling more and more upon the middle-aged taxpayer.

At the same time there has been a regular rise in the overall purchasing power of the old, and in some segments of American society old people are becoming a visible and contented leisure class. Attempts are also being made to increase the political participation of the old, and appeals to "senior power" have even become part of present government policy.

Given the complexity of such trends

and countertrends, we presently lack good techniques for assessing the degree of social cohesion among age groups. Social scientists should build indices relating to expectations and attitudes of various age groups toward each other and should monitor these attitudes in assessing the social health of a nation. Nevertheless, in the affluent societies of the world, the status of the aged has begun to improve. The question, however, is whether or not such gains can be continued in the face of a dramatic extension of the lifespan.

Two general strategies for lengthening the lifespan are being pursued: conquering major diseases and altering biological processes which underly aging. Breakthroughs on both fronts could add as much as 25 years to normal life expectancy.

If the average lifespan were to go beyond 100, especially if this were to occur in a relatively short period, the effects upon the social fabric are unforeseeable. Few scientists have given serious thought to the social implications, although speculative essays have begun to appear alongside the more familiar forms of science fiction. There have been few serious attempts to deal with such questions as these: Can an increased lifespan be achieved without keeping marginally functioning individuals alive for extended periods? Would a major increase in the proportion of the aged so aggravate the problems of health, medical care, income, and housing that the old would be worse off than now? What would be the major deleterious and the major beneficial effects upon the rest of society? Could income be divorced from work rapidly enough to balance off inequities between age groups? Would the work ethic change rapidly enough into a leisure ethic? Or, if the employable age were to be extended, what would the effects be? Will our values accommodate to a drastically altered age distribution? What will be the effects upon successive groups of young, and what will be the eventual effects upon their own old age?

Gerontologists now face a problem of such magnitude that it should be moved into the public arena for consideration. While the world is showing concern with social and ethical questions arising from scientific discoveries, questions about prolongation of life per se have not yet entered the mainstream of discussion. Perhaps this is itself a sign of bias against gerontology, or perhaps it is because other scientists do not believe the day is near when the human lifespan can be manipulated. Whatever the reason for the neglect, gerontologists should take the lead in opening the issues to public discussion. If the claims of the enthusiastic biologists are shown to be greatly exaggerated, this must be made clear lest the public be cruelly deceived. If the claims are only partly exaggerated, the issues must nevertheless be pursued. Many gerontologists are convinced that if life expectancy were increased by only 5 more years the effects would be so profound as to overturn our present economic and welfare institutions.

The ethical issues are of tremendous importance. If gerontology has now come of age as a science, then gerontologists must face the issue of accountability to the society just as other scientists are being asked to do.

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Death and Dying: A Course for Medical Students

David Barton, John M. Flexner, Jan van Eys, and Charles E. Scott

There is a growing need for physicians to be trained in the psychosocial events surrounding death and dying. This important area of medical practice has been created by rapidly advancing technology to prolong life, the increasing numbers of terminally ill patients treated in institutional settings, a growing awareness of psychosocial processes surrounding the death situation, and the expressed need from within and without the medical profession for a more humanistic approach to illness.

Vanderbilt University School of Medicine offers an elective course, Psychosocial Aspects of Life-Threatening Illness, for 3rd and 4th year medical students, limiting class size to 14 to ensure group discussion. A psychiatrist, a hematologist, a pediatric hematologist, and a philosophy professor conduct the class, which meets once a week for an hour and a half. The course format allows each student to work through his attitudes toward death and dying. Student attention is directed toward the psychosocial dimensions of life-threatening illness and the death situation—dimensions which involve the patient, the patient's interpersonal and cultural environment, and transactions within the caregiving milieu. For each session a focal topic or patient presentation, described below, is provided, followed by extensive group discussion.

Introduction and patient presentation—Prior to the class, each student was asked to read Pattison's paper, *The Experience of Dying* (*American Journal of Psychotherapy*, 21:32-43, 1967). In class a 44-year-old married woman with acute myelogenous leukemia was interviewed by one of the instructors, and the students asked additional questions. She gave a history of long-standing self-sufficiency and said that a major task in adapting to her illness was the acceptance of a dependent role. She spoke of the strength she had derived from her religion and maintained that she had no fear of death. In the student discussion, adaptation to acute illness was emphasized.

Death in literature—Tolstoy's short story, *The Death of Ivan Ilych*, was used as a focal point for the class discussion.

Patient presentations—A 45-year-old woman with Hodgkin's disease and her husband were interviewed by the class. They spoke of his adaptation to her illness and the effect of her illness on their interactions and their children's lives.

A 39-year-old minister with chronic leukemia related that he had directed his attention away from death and turned his interests toward a more constructive and meaningful life. Adaptation to chronic illnesses was contrasted with adaptation to acute illnesses.

Death symbolism and the fear of death—Lifton's *On Death and Death Symbolism: The Hiroshima Disaster* (*Psychiatry*, 27:191–210, 1964) and Wahl's *The Fear of Death* (*Bulletin of the Menninger Clinic*, 22:214–223, 1958) were assigned as reading. The class considered their own perceptions of dying and death and the feelings evoked by the previous sessions.

The theological dimension and pastoral counseling—A rabbi discussed the theological conceptualizations of

death and dying in Judaism and other religions and spoke of his care of dying persons and their families.

A pastoral counselor discussed care of a counselee during an extended illness and presented the funeral eulogy which he had delivered after the person's death. He discussed the techniques afforded him by his training in counseling and his identification as a clergyman.

The perspective of a philosopher—The philosophy professor spoke of his recognition of finiteness and transientness, contrasting the feeling of concern and caring about the recognition, acceptance, and affirmation of death with stoical acceptance.

The perspective of the nurse—A nurse from an adult ward, a pediatric nurse, and a clinical nurse specialist in psychiatric nursing told of their perspective in caring for the dying and described the problems involved. Interpersonal transactions within the caregiving milieu were emphasized.

Survival through medical progress and technology—The case of a patient who was a candidate for newly developed life-prolonging procedures was described. The multiple determinants of the decisions made were a focal point for a discussion of ethical considerations in prolonging life.

Grief and bereavement—Lindemann's *Symptomatology and Management of Acute Grief* (*American Journal of Psychiatry*, 101:141-148, 1944) focused attention of the group on the phenomenon of grief. Some members of the class spoke of their personal experiences with loss and grief, and the class in general utilized their recollections of the feelings which had been associated with the assassination of President Kennedy as a theme for exploring the topic.

Role-playing—Students enacted some of the difficult situations which emerge in the care of patients with life-threatening illness. One student assumed the role of physician, another assumed the role of a dying patient who requested that the physician stop all treatment and let him die. One vignette had the patient confront the physician regarding his religious views. Another dealt with the matter of obtaining permission for a post-mortem examination.

Problems of palliation—During this session, the psychosocial difficulties involved in the treatment of patients receiving palliative forms of treatment over long periods of time were emphasized. The class interviewed a 42-year-old man who had received radiotherapy, multiple courses of varying kinds of chemotherapy, and surgical treatment for reticulum cell sarcoma.

Life-threatening illness in children—A 2-month-old infant born with hydrocephalus, multiple meningomylocoeles, and other physical deformities was shown to the class. Discussion centered on individual attitudes toward available treatment and the physician's involvement in ethical matters.

The mother of a 3-year-old child with acute leukemia spoke of her inability to hear information which would indicate a poor prognosis. She related a dream in which she was forced to stand by and watch the child die and stated that at times she also had this feeling in reality.

Instructional Goals

This course was designed to fulfill the following specific instructional goals:

To facilitate gradual desensitization to the topic and promote the students' understanding and management of their personal feelings about death and dying.

To focus the students' attention on the psychological and sociocultural issues involved so that they, as physicians, might help people reach a reasonable level of adaptation in the face of death.

To present to and discuss with the students the perspectives of others involved in providing care for patients with life-threatening illnesses.

To encourage active consideration and discussion of ethical issues so that students begin to formulate and express their own positions and ideas.

Personal Feelings

Influenced by personal anxieties about death, medical students often find the area of life-threatening illness painfully sensitive and may resort to a form of avoidance which obscures important facets of patient care. The student may find comfort in a purely biological approach to medical care at the expense of failing to appreciate the psychosocial dimensions of the illness. Gradual desensitization through recognition and management of personal feelings about death and dying thus becomes a primary goal of instruction.

Increasing ability on the part of the class to manage these anxieties occurred through the group process as the course progressed. At the beginning, the discussion occurred at a superficial level with a paucity of expression of personal feelings by the class participants. Gradually, though, the discussion moved toward deeper levels of expression. The recognition of feelings evoked by presentations and the discussion of these feelings in the group context served as an effective means for facilitating this expression. Students recognized that just as each patient conceptualized matters pertaining to death in an individualized manner, so does each physician.

The importance of allowing ample time for group discussion was borne out by the fact that the group interaction allowed increasingly closer scrutiny of highly charged areas. Didactic presentations or patient interviews without group discussion cannot effectively overcome the avoidance of the subject of death and dying. On the contrary, when a student is presented with an organized set of rules for managing life-threatening illness, while at the same time experiencing anxieties and uncertainty, his avoidance and frustration are reinforced. It is important that instructors communicate their attitudes and feelings in such a way that the student views the exploration process as appropriate. In this manner the "working through" and synthesis of personal attitudes becomes viewed as an ongoing process rather than as an instantaneous adoption of ironclad, unquestioned attitudes.

Psychosocial Issues

Selected papers were utilized throughout the course, and the instructors presented additional material where appropriate. Attention was focused on issues important in caring for dying patients: the derivatives of the fear of death; the symbolic attributes of dying and death; attempts at conceptualization of death; knowledge about the psychological adaptive mechanisms employed by dying patients; interpersonal response in the therapeutic milieu; and concepts pertaining to grief and bereavement.

Psychosocial issues were brought into bold relief by the patient interviews. Patients illustrating adaptations growing out of different forms of illnesses, life circumstances, and belief systems were chosen for interviews and discussion. The alignments that occur

in the family constellation as a result of illness, financial strain, and the grief and bereavement of surviving persons were among the many areas identified as requiring attention by the physician.

Other Caregivers

Early in the course, students urgently asked for guidance from the instructors; however, they were encouraged to develop approaches to patients which best suited their individual experiences and personality structures.

The importance of communication and interaction between physicians and other caregiving individuals in the dying patient's environment was brought to the students' attention. Nurses told of their difficulties in managing patients with life-threatening illnesses when they do not know how much information has been imparted to the patient by the physician. Similar difficulties arise from a physician's lack of knowledge about a patient's religious views.

Through dialogue with nonphysician caregiving individuals, the students gained an awareness of the perspective of these individuals and recognized their role in caring for the dying; later they could utilize their services and techniques in a more effective manner.

Ethical Issues

Many treatment methods raise issues which fall into the realm of ethics; they provide new uncertainties and dilemmas for the patient, the family, and the physician. Decision-making and implementation of these treatments involve considerations outside the sphere of the medical students' education. Students in the class frequently voiced their sense of frustration in being excluded from ethical considerations in their work with patients. They welcomed the chance to explore and formulate their approach to these problems. They saw that many of the questions involved have no answer and are dependent upon the subtleties of the individual situation and the current societal attitudes.

It is anticipated that this course will help students to develop more effective approaches to the problems in caring for dying patients. Students themselves have underscored the importance of the course in providing a working knowledge of areas which in the past have not been presented to the student in a way which promotes self-understanding, learning, and continued inquiry.

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The Traumatic Syndrome

HECTOR WARNES

The study of individuals who endured acute or prolonged threat to survival has identified some common denominators of such experiences: risk of attack or injury; danger of death and a sense of vulnerability; family separation and loss; deprivation, fatigue, hunger, exposure to the elements, torture, economic and social chaos. The experience of concentration camp victims is here singled out as the prototype of the traumatic syndrome.

Psychodynamics—The person in situations of prolonged massive stress undergoes severe oral deprivation, total lack of narcissistic supplies, massive overload of punitive cues, repression of rage, loss of parental security, and loss of supportive persons, all of which in turn foster regression and identity diffusion. Various clinical terms describe the victim's reaction to the massive threat: automatization, robotization, freezing of affects, affective anesthesia, the inability to mourn, and identification with the dead. The loss of close relatives is one of the most arduous experiences to overcome, and concentration camp survivors typically feel abandoned and alone in the world.

There are four variables in every traumatic neurosis: the premorbid personality, which has been found to be deviant in up to 75 percent of the cases; the presence of the primary and secondary gains and/or compensations; the presence of a serious risk to self-preservation which becomes a psychologically threatening stimulus; an environment which reinforces these factors.

All clinical conditions labeled traumatic neurosis have similar psychological, psychopathological, and psychodynamic mechanisms. However, it is necessary to determine whether the trauma was the cause of the neurosis, the major precipitating factor, an aggravating one, or whether it was almost unrelated to it. Some pathogenic traumatic situations involve sudden overwhelming threats to life and integrity; others are characterized by protracted degradation of human dignity, fear of being killed, and discrimination or racial persecution. Furthermore, conditions of captivity in which no threat to life exists should be distinguished from those situations with daily risks and the expectation of annihilation, and threat to survival in solitary confinement is pathogenically different from threatening stimuli in a group situation.

Psychopathological Reactions Due to Threatened Survival

The traumatic syndrome may be superimposed on any previously existing personality type and/or illness. It may also precipitate the onset of an endogenous psychosis where the traumatic events are incorporated in the contents of the psychosis. This was seen in treating a female concentration camp survivor who was manic-depressive—in a manic phase she became litigious and querulous, and demanded revenge, justice, and compensation for the persecution. In the depressive state she relived vividly her experiences during the war. Between manic and depressive phases she displayed the typical symptoms of a traumatic neurosis.

The psychopathological reactions encountered in concentration camp victims are: hysterical reactions, psychopathic litigious states, compensa-

tion neuroses, and qualitative changes of personality traits. In all cases one question recurs: Is the breakdown chiefly related to the severity of stress or to the preexisting personality?

The conditions which threaten survival, in degree of severity, are loss of civil rights, separation, social injustice, starvation, defamation and calumny, loss, discrimination, bombing, persecution, horror scenes, ostracism, exposure to cold, captivity, brutality, and a threat to life and self-esteem.

Survival Syndrome

The magnitude, duration, and type of traumatization leaves an indelible imprint on the personality. Typical "rerun" nightmares, fear of falling asleep, living-corpse appearance, chronic depression, and various psychosomatic complaints have been noted.

Three facts deserve special comment: The survivor syndrome has been observed not solely in concentration camp victims but also in people who spent a significantly long period hiding from persecutors in Nazi Germany. The "bridge period"—a symptom-free phase—lasts about 3 to 10 years after liberation; decompensation occurs when the individual becomes outwardly prosperous. The dread of being exposed to further injury or death sets up traumatophobic and avoidance defenses to ward off repetition of the trauma.

Survivors repeatedly lament about a life which has lost all meaning and is not worth living. The guilt for having survived and for not having been able to rescue their relatives combined with the unconscious hostility against their own parents for having failed to protect them is expressed in trying to find something which might make it all understandable.

The people who endured prolonged trauma in concentration camps early in life (6–12 years) were prone to suffer character deformation. The reaction of children between the ages of 12 and 17 years was likely to be a psychosomatic autonomic disorder. Survivors in their twenties suffered chronic anxiety states and later in life often reacted with depression. Those subjected to persecution in ghettos and concentration camps during adolescence manifested chronic identity diffusion and many showed negative identity, interpersonal difficulties, diffusion of time perspective, and poor work values. The conditions encountered following liberation, particularly migration, change of culture, altered social status, and loss of family, seem to crystallize a chronic depression.

Survival tolerance—Survival tolerance to severe chronic stress depends upon: a consistent moral, political, or social philosophy; religious reverence for life; a feeling of group fate; denial of the most unpleasant part of reality; emotional detachment; "closing off" and depersonalization; submission and compliance to the aggressor; and, finally, wish-fulfilling daydreams and fantasies which negate the utter helplessness.

Six factors determine the ability of the individual to cope with the aftermath of life in extreme situations: the length and intensity of the stress; the premorbid personality; the degree of physical, psychological, and social damage inflicted; the reparative capacities of the organism; the ability to deal with the complex loss; the new, adopted environment and the vicissitudes of acculturation.

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Social Services in China

Ruth Sidel

In the fall of 1971 my husband, a physician, and I went to the People's Republic of China for 1 month as guests of the Chinese Medical Association. We visited medical institutions, hospitals, medical schools, neighborhood health centers, and mental hospitals as well as factories, communes, urban neighborhoods, nurseries, and kindergartens. In each setting we observed how social services were being provided.

Nature of the Country

China is a rural country; 80 percent of its estimated population of 800 million live in the countryside. Virtually all services in China—most of which did not exist before the revolution in 1949—are decentralized. Although the broad principles of planning and action are determined by the central government in Peking, local communities choose the specific methods for implementing these decisions. All units of the society—neighborhoods, communes, schools, hospitals, factories—are governed by revolutionary committees. The "mass," all people who live or work in a unit, elects its representatives to the revolutionary committee.

The principles of self-reliance, mutual help, serving the people, and learning by doing are defined by Mao Tse-tung. Communes, in which all people in the countryside live, are encouraged to be self-sufficient; light industry has been introduced so that each commune can grow and manufacture as much as possible of those goods it requires. Similarly an individual is encouraged to be self-reliant; but while self-reliance is encouraged, so is mutual aid. The belief in learning while doing has led to massive participation in engineering efforts, health care, and local government.

Another principle of Chinese life today is ability and performance. What is important is how well a person performs his work, not how many years he has been trained for a job or what degrees or licenses he holds. Formal education is merely the beginning of one's training; on-the-job training is considered far more important and is a process that never ends.

The Community

A worker's village, Chao Yang, in Shanghai has a population of 68,000 people; most of the adults work in nearby textile factories. The community is largely self-sufficient; it contains schools, a post office, bank, library, movie theater, health center, a variety of shops and restaurants, and a swimming pool. The village is subdivided into eight lanes, each of which has a health clinic, a branch department store, and food markets. A nine-member standing committee of the revolutionary committee runs the everyday affairs of the community.

The lane we visited had 52 groups made up of the people who live in one building; each group elects a leader and a deputy leader, who are often retired workers and unpaid. The group leaders in Chao Yang organize retired workers and housewives into groups for the study of Mao Tse-tung's thoughts; organize social services for the area; mediate quarrels; organize retired workers to educate the young people about the "bitter past"; and provide health care.

Although people can look to the lane committee when they are in need, they are expected to rely on their own initiative as well. Neighbors are also actively involved in helping each other, so that families do not live in isolation but are part of a community. In 1967 a worker and his wife both died, leaving three children, aged 8, 10, and 13. These children have subsequently been raised by the collective efforts of the neighborhood committee. The government provided for the children financially, but the local committee saw that they were fed, clothed, and educated.

The community also plays a significant role in the discharge plans and rehabilitation of patients in psychiatric hospitals. The local neighborhood committee helps the recently released patient readjust to his family and community.

Place of Work

The place of work is intimately concerned with an individual's personal welfare. Psychiatrists described the process of admission to a mental hospital as being the cooperative effort of the patient, his family, his place of work, and the psychiatrists. They claimed there was rarely a need for commitment because the patient trusted the foreman at his job, and if the foreman and the patient's family felt he needed to be hospitalized, the patient generally agreed and was admitted voluntarily. Before discharge, the foreman at the place of work is again consulted with regard to the type of work best suited to the patient's recovery. His job is held open for him during the hospitalization period but the specific tasks he performs when he returns may need to be changed to speed recovery.

Role of the Professional

The roles of both the physician and the nurse encompass the social functioning of the patient as well as his physical well-being. For example, in addition to visiting the patient's place of work, the psychiatrists and the nurses visit the patient's home before his discharge to educate the family about mental illness and after his discharge to provide followup care.

The emphasis is on bringing professionals in the medical field closer to their patients. Physicians in all urban hospitals provide care in factories, schools, and neighborhoods in the city and also spend time as part of mobile medical teams in rural areas. Medical personnel are expected to treat the whole patient—his social, emotional, and economic as well as physical needs.

Barefoot Doctors

Since the Cultural Revolution many paraprofessionals have been trained to help give medical care and be a bridge between the general population and the medical professionals. In the rural areas "barefoot doctors" have been trained in immunization, health education, and the treatment of minor illnesses. Barefoot doctors receive approximately 3 to 6 months' formal training, then work half time as agricultural workers and half time as medical workers; they are paid as full-time agricultural workers.

"Red Guard doctors," usually housewives, are the urban counterparts of the barefoot doctors, but are generally unpaid and work in urban neighborhood health centers under the supervision of fully trained physicians after only 10 days' training. As part of their initial training they attend "speak bitterness" sessions in which they share memories of their lives before 1949 to

gain the courage and confidence to believe they can do medical work.

The "worker-doctor" with 1 to 3 months' training works half time as a production worker and half time as a medical worker in his factory. Both in cities and rural areas "health workers" have been trained by and are directly responsible to barefoot doctors or Red Guard doctors. These workers are also responsible for health education, immunizations, and treating minor illnesses. All four categories of paraprofessional health personnel—barefoot doctors, Red Guard doctors, worker-doctors, and health workers—incorporate social service functions into their medical work.

Immunizations are an example of the integration of social and medical tasks. Every child has a card with his immunization record on it. When it is time for the child to have another inoculation, the family is informed that it is time for an inoculation. The mother then brings the child to the lane health station. If it is not convenient for the child to be brought to the health station, the inoculation is given in the home, sometimes by the Red Guard doctor, sometimes by the health worker. These workers know the population intimately; they are all neighbors.

Birth control is another example. In Hangchow the Silvery Lane Health Center has health workers from every block in the lane. All the workers are housewives who live in the lane in which they work; 80 percent have other jobs and the rest are retired workers. Each month the health workers go from door to door to determine what each family in their block is using for birth control. At the same time they educate the women about birth control and family planning, explaining that two or at most three children are considered the optimum number.

The social services performed by branches of the Communist party run the gamut from community organization to marital counseling. For instance, the five social service tasks of the party group for women's work are: to organize women to take an active part in production; to spread literacy among women and get them to study and take an interest in social questions; to help them do their domestic work effectively and economically; to teach them personal and public hygiene; and to give help and advice on personal problems.

Role of the Individual

The individual is expected to participate in curing his illness (physical or mental) or in overcoming the difficulties that face him or his community. In the psychiatric ward of the Third Peking Hospital the staff encourages the patient to struggle against his own disease. In addition to the use of chlorpromazine, acupuncture, and "heart-to-heart" talks with psychiatrists, the patient studies the works of Chairman Mao so that he may understand his own illness and be able to fight against it as an enemy. The patient investigates his own disease, and recognizes his own condition to prevent relapse.

Patients in the Shanghai Mental Hospital are divided into groups to work together against disease. These patient study groups learn to understand their illness and fight their disease. This view of the patient's relationship to his mental illness is a curious combination of individual responsibility and viewing the illness as an external enemy. The dual view maximizes the patient's efforts to fight his illness and leaves him less guilt ridden if he fails.

Not only are patients expected to

participate in their own care, but they are also expected to help one another. The Shanghai Mental Hospital has instituted a buddy system whereby the healthier patients who have been in the hospital longer help the newer, sicker patients adjust to the hospital and understand their illness.

Implications for our Society

Deprofessionalization—In an attempt to deliver services to all, China trains indigenous paraprofessionals for short periods before sending them to work to continue their training on the job. The understanding of disease and its appropriate treatment are impressive. At the same time the medical workers still function in their original roles as peasants, factory workers, and housewives, so that they have not become separated from those they are serving.

Medical schools have recently reopened with 2 and 3 year courses following junior middle school. The emphasis now is on recruiting from among the masses and in maintaining the student's identification with the people he will serve.

The apparent success the Chinese have had with deprofessionalization suggests that we in the United States might find new ways of recruiting and be open to shorter and more imaginative periods of training for all professions and must search for ways of uniting the paraprofessionals and the professionals with those they serve.

Mass participation—The Chinese emphasis on learning while doing and on each person's obligation to help build the nation leads to an intense involvement at the local level. Whether through decentralization or other mechanisms, people in the United States must again be helped to feel they have a stake in our society and must indeed be given some actual power to influence their own lives.

Mutual help—The concern for one another must be reintroduced into our society. Much of the social services performed by professionals in agencies might be accomplished far more effectively by neighborhood people helping each other. The social work profession needs to activate local people to take over these services themselves on a systematic scale. This may mean less efficiency for a period of time and will require a willingness on the part of professionals to relinquish some power. Although mutual help is being practiced in this country by communes, free clinics, community drug programs, and block associations, the poor who feel most powerless are rarely in the helping role.

Self-help—Social work's reliance on institutions and the subsequent bureaucracies such institutions create may contribute to the individual's feelings of impotence and despair. It is time for social workers to evaluate whether their help cripples self-respect and initiative rather than activates these forces.

Would organization of self-help communities in this country provide adequate services? Mutual aid and self-help must be considered in depth by the social work profession as well as other service professions in the United States.

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Human Accountability in a Community Mental Health Center: Report of an Automated System

BERNARD L. BLOOM

The Westside Community Mental Health Center, serving a population of 155,000 persons in northwest San Francisco, is composed of 43 separate program elements providing 13 different types of service in 20 different agencies who have agreed to work collaboratively in the provision of mental health services to the residents of a defined geographic area. The goals of the center are to achieve comprehensive and integrated mental health services by coordinating and improving existing programs, by discouraging unnecessary duplication of services, and by developing services to meet unmet needs. By means of the consortium the community hopes to reduce the chronicity associated with much emotional disorder, to minimize disruption in the lives of the mentally ill, and to return patients promptly to satisfying functioning. The central information system was designed primarily to assist the participating agencies in reducing unnecessary duplication of services and providing continuity of care. Secondarily, it was hoped that the analyses provided by the information system might estimate the quality of care and might suggest directions for developing new services.

Development and Operation of the Human Accountability System

Designing the system—Certain constraints were operative in the mental health center: The centralized system had to make minimal demands on staff for submitting information, but at the same time it had to ask that information which would assist the collaborative effort be returned promptly. First, it was decided that the events to be recorded in the centralized system would be contacts, or "transactions." A transaction is thought of as an administrative rather than a clinical term, and a total of 12 have been identified. These include: put on waiting list; remove from waiting list; brief contact; admitted; referred to another Westside agency; referred outside of the consortium; discharged by mutual agreement; discharged by dropout or against professional advice; discharge, other; discharged and transferred to another Westside agency; discharged and transferred outside of the consortium; arranged for concomitant care. Transaction reports are completed by all participating program elements whenever one of these events occurs regarding any patient living in the catchment area.

Second, it was decided that system accuracy would require minimum identifying information about a particular patient before accepting transaction reports about that patient. This data would include the name, address, sex, and date of birth. Provisions are made for updating this information in case errors are found or in case a patient moves or changes his name.

Third, it was decided to develop a single form that would be complete on one side of an 8½ by 11 sheet of paper and could be filled out in 30 seconds. Items requested on the form included: numerical designation of the reporting agency; date and hour of transaction; Westside case number of patient; name, address, sex, ethnic group, and date of birth of the patient; space for two separate transactions; and a single-digit instruction in case the report requires some correc-

tion of the case record. All codes and instructions appear on the sheet and carbonless paper is provided.

Fourth, a system had to be flexible enough to accept transactions in any order. It also had to be able to produce an alphabetically sorted master file referenced by case numbers.

Finally, the output from the system had to be written in plain English so that no decoding of any kind would be required by the reader.

Operating the system — An employee of the Westside Community Mental Health Center daily makes the rounds of all participating agencies, delivering computer output and picking up completed transaction reports. Agency representatives call Westside central office to obtain or verify Westside case numbers. All transaction reports are then transferred to punched cards which are input into a computer along with program instructions. The Westside Community Mental Health Center generates between 75 and 150 transactions daily.

Before a new transaction is accepted into the system, it is checked both for completeness and accuracy and for logical errors when compared to the existing record. A transaction report is rejected during the loading operation if it does not meet accuracy requirements or if it results in a logic error. When a transaction report is rejected, an error message is produced indicating the nature of the error, then the rejected transactions can be corrected and reloaded in a subsequent computer run.

Description of the Automated Reporting System

Output from the system consists of three conceptually separate report packages:

The master list—A master list, generated on request, includes alphabetized information on all patients ever known to Westside. The list includes name, identifying data, and all transactions reported for a patient, and an index by case number appears at the end of the master list. The master list has become so large it is now routinely put on microfilm.

Patient management messages—Whenever a program element reports that it has admitted a patient, it automatically receives a history of that patient as shown on the master list. The agency can then make whatever inquiries it deems appropriate in developing its own treatment plans. Each program element submits information on the approximate number of patients for whom it has the capacity to provide service. Matching this number against the actual number of cases active with the agency provides the basis for a report that will inform all participating agencies of possible room in the entire system, a report that is useful in making referrals and in arranging transfers within the Westside Community Mental Health Center. Periodically each program element receives a list of all patients on its waiting list, all patients it has discharged, and all of its active patients who are in concomitant care—that is, who are active in one or more other agencies.

Whenever a transaction is reported by an agency regarding a patient who is either active or on the waiting list of another agency, both agencies are automatically informed of that fact. Finally, a special set of messages is produced whenever a transaction involving movement between agencies is reported. These transactions include referrals, transfers, and arrangements for concomitant care within the consortium. The first messages, issued the day after the transaction is reported, alert both the referring agency and the receiving agency that the transaction has occurred. For 2 weeks both

agencies receive daily messages reminding them that a referral, transfer, or arrangement for concomitant care has been instituted; this process stops if a transaction report is received from the second agency indicating that it has had some contact with the referred patient.

Analysis of the functioning of the Mental Health Center—In the final type of automated analysis, designed to describe the entire mental health center system, counts are made of specified events within the system which are then presented in tabular form. The four patient parameters available for analyses are age, sex, ethnic group, and census tract. These system analyses serve to develop an overall understanding of the Westside clientele and of how the Community Mental Health Center is functioning.

Six different types of analyses are available:

- The frequency of occurrence of any specified transaction during any specified time period is tabulated by age, sex, ethnic group, and census tract. Available options include a count of either transactions or cases, plus a variety of different age groupings. This transaction analysis is available separately for each of the program elements, for each of the umbrella agencies, for each of the program types, or for the entire consortium.
- The number of patients in each activity category is tabulated by age, sex, ethnic group, and census tract at the start of a time period; the cases added and subtracted from that category during the time period are similarly tabulated; and, finally, the cases in that category on the last day of the time period are tabulated. An accounting is available for four different categories of patients: active, patients on waiting lists, active in more than one agency, and discharged. These analyses are available for the entire consortium or for any of its component parts.
- Movements between program components have been conceptualized as either patient initiated or as system initiated. Analyses of interagency movements are provided separately for these two types of moves. With regard to patient-initiated moves, the analyses show both their type and number and the time interval between the most recent transaction at the first agency and the first contact at the second agency for every pair of program elements in the consortium during a specified time period. For system-generated moves (referrals, transfers, arrangements for concomitant care) the analyses show for each pair of program elements in the consortium during a specified time period the number of attempted, successful, and unsuccessful moves; and for all successful moves they show the time required to complete the move.
- Analyses are separately available for all patients on waiting lists, all active patients, all patients in concomitant care, and all discharged patients. These analyses first identify all patients in the entire consortium or in any program or element in the specified status and then tabulate for this group of patients each type of transaction with each program element. Separately available in another analysis is the time distribution between entering into that status category and the specified transaction. An option is available that makes it possible to tabulate all transactions during the specified time period or just the first transaction during the time period.
- In the analysis which focuses on length of treatment, information regarding episode number and length of episode is tabulated for each program element and for each type of dis-

charge. An episode of care begins on admission to any program element in the consortium and terminates when the patient is no longer active in any program element.

• The final analysis tabulates for each program element the number of cases who were at some time during the specified time period also active in another element. Additional analyses are performed to identify numbers of patients who were simultaneously active in three or more program elements. These analyses specify all program elements involved, and include information in terms of numbers of cases and also in terms of percent of all active cases.

From these analyses it is possible to study the dynamics of the entire Westside consortium, what types of transactions occur at which agencies and to what type of patient, how patients move between program elements, and how program elements work with each other. The data from which these system analyses are made come from the transaction reporting form mentioned above. No additional data are required.

Limitations of the Human Accountability System

In discussing the human accountability system in a variety of agencies, it has become clear that there can be some uneasiness associated with its information-sharing function. Readiness to implement the various components of this data processing system varies among agencies, and the system requires confidence in one's consortium colleagues. Unless the consortium participants feel they have adequate control over the human accountability system, it may not be utilized to its fullest extent. Our limited experience at Westside has suggested that agencies, in return for assurances that no patient information be disseminated outside of the consortium boundaries, will permit the full sharing of information within the consortium. Thus, while the human accountability system is a tool for studying transactions among agencies, it also may serve as a vehicle for building and indexing degree of interagency trust and confidence.

The Westside Community Mental Health Center hopes to be able to provide comprehensive high-quality care to the residents of its catchment area. At least three sequential steps seem necessary to accomplish these objectives: to facilitate and test collaboration among a group of agencies; to develop ongoing program evaluation procedures; to identify unmet needs and develop new services to meet these needs. The human accountability system is specifically designed to assist in meeting the first of these objectives. Its strengths lie in the fact that it provides a reasonably comprehensive view of the caretaking system, and it offers a large amount of useful output available from very modest input.

Certain limits of the information system are apparent: First, although it may yield information relevant to program effectiveness, it certainly cannot serve as an adequate base for program evaluation. Second, although some hypotheses might be suggested from the data regarding specific unmet needs, much more information would be required to develop and test etiologically based hypotheses or to develop new programs to meet previously unmet needs.

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Mental Health News Digests

NIMH Studies Problems of the American Indians

The National Institute of Mental Health recently has announced two new projects focused on some of the unique problems of American Indians:

The first, a series of conferences, is designed to provide tribal leaders, concerned professionals, and government officials the opportunity to share information and expertise to combat the growing suicide rate among American Indians.

A major purpose of the conferences is to provide training for police and other correctional personnel, for they are often the first to come into contact with a potential suicide. Frequently the potential suicide is a young Indian who is having problems with alcohol; also Indian suicides are often related to a lack of understanding of the social and cultural problems unique to the Indian. An essential factor in the conferences, therefore, has been the involvement and interaction of local tribal leaders and professionals in the fields of crime, suicide, alcohol, and community mental health working with local correctional personnel.

It is hoped that the insights and experiences gained in the conferences will contribute to a published training manual to help correctional officials prevent suicide among Indians.

Four conferences have been held at locations convenient to various Indian reservations—Warm Springs, Oregon; Aberdeen, South Dakota; Albuquerque, New Mexico; and Phoenix, Arizona. Financial and professional resources for the conferences have been made available through the NIMH Center for Studies of Crime and Delinquency, the National Institute of Alcohol Abuse and Alcoholism, the HSMHA Indian Health Service, and the HSMHA Community Health Service; the conferences have been organized by the National Congress of American Indians.

The second project—a 2-year, $98,000 research grant awarded by the NIMH Center for Minority Group Mental Health Programs—focuses on the socialization of American Indians in an urban setting. The study will involve 100 families from Sioux and Navaho tribes who have been relocated to the San Francisco bay area; field interviews and observations will be carried out by Indian researchers. The Sioux and Navaho tribes were chosen for study because they represent contrasts in cultural tradition, physical admixture, and degree of acculturation among tribes.

The areas being investigated include the nature of the family's commitment to traditional Indian behavior and attitudes; the adjustment of the Indian family in the city and the process of acculturation that occurs for all family members; the childrearing practices and methods of socialization in the family; the effects on the child resulting from the family's urbanization and acculturation, the childrearing and socialization procedures, and the child's preschool and school experiences.

The profiles, problems, and processes identified among the Sioux and Navaho will be used for developing further studies of groups exhibiting different social structures or tribal patterns, will contribute to comparative studies of child development, and will be used in designing programs for improving the living conditions and social adjustment of other Indians.

The study is being conducted by Dr. Dorothy L. Miller, a member of the Blackfeet Tribe and Director of the Scientific Analysis Corporation.

State News: Wisconsin, Kentucky, New York

Wisconsin—In response to recommendations for mental health services made from the Governor's office, the Wisconsin Division of Mental Hygiene initiated a study of its delivery of services to alcoholics, drug abusers, the mentally ill, and the mentally retarded. Two sections of the study and recommendations have been completed—community-operated services and State-operated services.

In the area of community services, the Division's mental health program traditionally has emphasized the importance of patients receiving help near home. But to insure equal access to local services the study recommends that the Wisconsin State Statutes be amended to require counties to provide a full range of care for all disabilities through county facilities or through the purchase of services as close to the patient's home as possible.

At the present time county hospitals are providing care to people with diverse needs—some for medical and social care, some for mental health and psychiatric treatment. Along with the recommendation that hospitals designated as mental hospitals should provide mental health treatment to all patients, the report recommends that beds not used for mental health patients should be converted to medical care beds in public medical institutions or social care beds in other facilities that offer residential, intermediate, or personal care.

A study of the physical plants of the county hospitals revealed that 11 of the hospitals are described as unsafe, either in total or in part, because they do not meet modern standards of fire safety. Therefore, plans for the conversion of beds must go hand in hand with defining options on what to do about unsafe buildings.

Part II of the study deals with the State institutions and complements the recommendation in Part I that care for the mentally ill be the responsibility of counties. Specifically, it is recommended that Mendota State Hospital, Madison, and Winnebago State Hospital, Winnebago, be converted to mental health institutes responsible for administration, research, training, consultation, and specialized treatment. It was further recommended that the Children's Treatment Center, Madison, be administratively merged with Mendota, so that the Children's Center could function as part of the institute concept.

The State Board of Health and Social Services has accepted the majority of the study's recommendations, including the institute concept and the merger of the Children's Treatment Center with Mendota. (From *Wisconsin Mental Hygiene Review*, 7(5), November 1972)

Kentucky—In the first half of 1973 a system of 37 video computer terminals will be installed in all facilities and offices of Kentucky's Department of Mental Health. Each terminal will be connected by telephone lines to the existing computer facilities of the State finance department. The new terminals will make available to each facility a mechanism for accessing and updating patient master files, financial accounting files, personnel files, and master drug inventory files. The network will also afford easy access to summaries of patient populations, budget information, allocation of resources, staff distribution, treatments in current use, and crisis intervention programs. (From *Psychiatric News*, 7(24), 1972)

New York—The development of alternatives to hospital care has resulted in a steadily declining State hospital resident population, according to a report of

the New York Department of Mental Hygiene. In the first week of December 1972 the department's State hospitals had 5,692 fewer resident patients than for the same period a year earlier. At the same time non-inpatient State hospital services increased about 20 percent in 1972, as out-of-hospital services—partial hospitalization, home care, day care, and outpatient services—averaged about 50,000 patient visits per month.

Paralleling the general decline in hospital population in 1972 was a decrease in the number of aged patients. This appears to be attributable, at least in part, to preventive programs such as geriatric screening and day programs which preclude admissions of large numbers of elderly patients.

The shift in the balance of resources toward increased out-of-hospital services marks a trend toward meeting the needs of mentally ill persons in new, more appropriate ways. (From *Mental Hygiene News,* 44(1), 1973)

OCD and OE Emphasize Education for Parenthood

One of life's most demanding and perplexing responsibilities is that of child-rearing, yet it is a responsibility for which we receive little formal preparation. With one in every ten 17-year-old girls being mothers, the need for immediate guidance in being an effective parent has become imperative. A new national program, Education for Parenthood, has been launched jointly by the U.S. Office of Child Development (OCD) and the U.S. Office of Education (OE) to heighten sensitivity to the social, emotional, educational, and health needs of children; to increase understanding of the role of parents in fostering a child's development; to strengthen the family as a fundamental unit of American society; and to attract young people into careers as child care workers.

A major thrust of the Education for Parenthood program has been the development of a model curriculum for students in grades 7 through 12. The curriculum, "Exploring Childhood," was designed by the Education Development Center of Cambridge, Mass. on a $750,000 grant from OCD, and $266,000 of research grants from the National Institute of Mental Health supported some of the developmental research.

"Exploring Childhood" will be field-tested this year in seven public schools and private centers and next year in 200 school systems. Classroom instruction will be combined with practical experience in day care centers, Head Start programs, and kindergartens. Films, audio-cassettes, workbooks, and teaching manuals have been created, and a manual for school administrators will suggest organizational arrangements that need to be made, pitfalls to avoid, and possible sources of funding. An evaluation of the field-testing plus a report of findings are planned, and large-scale general distribution of program materials will take place after the 1973–74 academic year.

In another aspect of the program, national youth-serving organizations will be awarded OCD grants totalling $500,000 to develop demonstration parenthood education programs. Such programs may be organized on a national or regional basis and will involve national staff, local affiliates, and other community resources in team efforts directed toward helping youngsters to understand themselves and their families and to develop concepts and skills that will be useful when they become parents.

Additionally, in 1973 OE and OCD will issue two booklets describing existing

parenthood education programs in public schools across the country.

For additional information about the Education for Parenthood Program write to Mr. W. Stanley Kruger, Chief, Program Development Staff, BESE, Office of Education, Washington, D.C. 20202. (From *Children Today,* November-December 1972 and *American Education,* December 1972)

Heart Attack Stress Affects Men Differently at Different Ages

A Chicago study has shown that patients of different age groups show significantly different reactions to the stress of acute physical illness. In research involving 99 patients who suffered acute myocardial infarction, investigator Dr. Mitchell N. Goodman attempted to outline and clarify the patterns of immediate and long-term adaptation to such severe stress in men of three age groups—under 50, 50–59, and over 60.

Interviews conducted 3 weeks after entering the hospital and followups 4 months after release from the hospital probed such areas as expected future withdrawal from environment, expected effect on sexuality, expected impairment of job and social activities, depression, anxiety, and cardiac adjustment.

Both during and after hospitalization the over-60 group more readily acknowledged the possibility of imminent death, indicated more depression, and had poorer scores on the Cardiac Adjustment Scale (CAS). They also expected greater withdrawal from their environment and a greater effect on their jobs, social activities, and sex lives.

During hospitalization patients in their 50s were less likely to report depression and were more likely to refuse to acknowledge their illness, while at the same time acknowledging that they expected some impairment in their future job, personal, and social involvements. After hospitalization, however, they felt little effect on their lives and scored better on the CAS than did the older victims.

In the hospital, patients who were under 50 years old showed less depression and less acknowledgment of their illness than the other groups. They also expected least impairment of sexuality and general functioning in their environment. After discharge from the hospital, however, they showed significantly more depression than patients in their 50s plus greater anxiety than patients in either of the older groups.

The severity of the myocardial infarction had little effect on any of the variables studied. Results of the study raise some doubts about the notion that unexpected "off time" life crises are the most traumatic, for the older patients—for whom a heart attack is "on time" and expected—appeared to be the most severely affected. Nevertheless, more long-term research is necessary to ascertain whether the stress of a heart attack in the long run will be more traumatic for younger patients.

Dr. Goodman's address is 2528 Allison Court, Glenview, Ill. 60025. (Adapted from *Geriatric Focus,* 11(4), 1972)

Children Learn Adult Roles Without Both Parents in the Home

Results of a cross-national study of 4-, 5-, and 6-year olds indicate that even children whose fathers are absent and whose mothers must work have conventional notions about the different roles men and women customarily play in our society. Findings suggest that a child's initial learning of adult role stereotypes is

provided by brothers, sisters, relatives, mass media, and school experience despite their home situations.

Investigators Joan Aldous of the University of Minnesota and Takeji Kamido of Osaka City University in Japan, under a joint research project sponsored by the National Institute of Mental Health, studied conceptions of father and mother roles held by Headstart children in Tennessee and rural Japanese children from low-income families. Their results point out that children are aware of the parental division of labor and roles at an early age. The investigators speculate that these children will adopt socially expected roles when they mature to adulthood.

For further information write to Joan Aldous, Ph.D., Associate Professor, Department of Sociology, University of Minnesota, Minneapolis, Minn. 55455.

Cohort Study Reveals Weaknesses in Juvenile Justice System

A comprehensive study of juvenile delinquency involving almost 10,000 boys born in Philadelphia in 1945 reveals the following: About 35 percent of the youths had at least one officially recorded contact with police for delinquent behavior. A group of 627 of the boys accounted for over half of all the delinquent acts and about 70 percent of the robberies, aggravated assaults, and homicides committed by the entire cohort. The juvenile justice system apparently had no effect on reforming the chronic offenders.

The study, conducted from 1966 through 1971, was partially funded by the NIMH Center for Studies of Crime and Delinquency and represents the first comprehensive study in the United States of the delinquent behavior of an entire birth cohort. All official police contacts for delinquent acts occuring among the boys from age 10 through age 18 were analyzed, thus giving a nearly complete picture of the pattern of delinquent behavior displayed by the youngsters over a period of 8 years. While fully one-third of the boys had at least one officially recorded police contact for delinquent behavior, only 18 percent of this group were chronic offenders who had five or more contacts for delinquent acts.

The study showed that the courts and criminal justice system tend to deal more severely with nonwhite than with white boys for the same offenses, even when nonwhite offenders are from a higher socioeconomic status than the white offenders.

The investigators claim that the juvenile justice system, at its best, has no effect on the subsequent offensive behavior of youths and, at its worst, has a deleterious effect. A greater number of those who received punitive treatment not only continued to violate the law, but they also committed more serious crimes more rapidly than those who experienced a less constraining contact with the judicial and correctional systems.

The scientists conclude that to improve juvenile justice in the United States, more effort should be focused on the serious repeaters, who are relatively few but who account for most offenses. At the same time, minor misbehavior by juveniles should be eliminated from juvenile justice so that more manpower, time, and public funds can be concentrated on groups that account for most juvenile crime.

Findings from the study have been published in a book, *Delinquency in A Birth Cohort*. Investigators are Dr. Marvin E. Wolfgang, Director of the Center for Studies in Criminology and Criminal Law at the University of Pennsylvania,

Robert M. Figlio, a Research Associate at the Center, and Dr. Thorsten Sellin, Emeritus Professor of Sociology at the University of Pennsylvania.

APA Adopts Revised Ethical Principles

At its December 1972 meeting the American Psychological Association Council of Representatives adopted a new component for the APA's ethical code. Developed by the ad hoc Committee on Ethical Standards in Psychological Research, the new *Ethical Principles in the Conduct of Research with Human Participants* consists of a preamble and ten principles which will replace subprinciples A–B–C under Principle 16 of the APA's Ethical Principles of Conduct.

The 10 newly adopted principles cover the following issues in experimentation with human subjects: ethical acceptability of a research project; responsibility for ethical practice of all investigators and research staff; disclosure to the subject of all aspects of the study which might influence willingness to participate; deception as a necessary part of an experiment; the subject's freedom to decline to participate; an explicit agreement between investigator and subject that clarifies the responsibilities of each; protection of subjects from physical and mental discomfort and danger; clarification of the nature of the study after data are collected; assurance that participation does not lead to undesirable consequences for subjects; and confidentiality of information about research subjects. (From the *APA Monitor,* 4(1), 1973)

NSAC Offers Information and Referral Service for Mentally Ill Children

The National Society for Autistic Children (NSAC) operates an information and referral service designed to serve parents, professionals, and others wanting information about mentally ill children. Still in developmental stage, the information service already has amassed a considerable amount of information and welcomes contacts from those who have information to share or those who need information to help solve problems related to the education, care, and treatment of mentally ill children. The NSAC Information and Referral Service is ready to offer—and is seeking—the following kinds of information: names, addresses, and descriptions of day and residential schools, camps, hospitals, or diagnostic and evaluation centers for mentally ill children; names of cities and States where mentally ill children are educated in the public school system; names of families within circumscribed geographical areas who are dealing with similar kinds of problems in child mental illness; ways to effectively mobilize community resources to provide services for mentally ill children; legislative information; legal rights of mentally ill children; innovative programs; sources of funds for mentally ill children and sources of funds for teacher training; information on health insurance, trust funds, and income tax; information on how child mental illness is handled in other countries; and lists of contacts with societies for autistic children in other countries.

Under contract to NIMH, the National Society for Autistic Children now is conducting a survey of programs for severely mentally ill children. The ultimate aim of this survey is to compile and publish a directory of such programs in the United States.

To share your information or to request information, write to Ruth C. Sullivan, Director, NSAC Information and Referral Service, 101 Richmond Street, Huntington, W. Va. 25702.

recent nimh publications

Single copies of these publications may be obtained from the Public Inquiries Section, National Institute of Mental Health, Room 15C17, 5600 Fishers Lane, Rockville, Md. 20852. A complete list of all publications available from the NIMH may also be obtained from the Public Inquiries Section. If a price is given, the publication may be ordered in quantity from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Enclose a check or money order payable to the Superintendent of Documents.

Schizophrenia Bulletin, No. 6, Fall 1972. Focuses on the psychosocial treatment of schizophrenia. Three articles review research into individual psychotherapy, family therapy, and behavioral modification; another describes a community-based program for chronic patients. Film directory and bibliography. DHEW Publication No. (HSM) 72-9104. $1.50.

Not the Law's Business? An Examination of Homosexuality, Abortion, Prostitution, Narcotics, and Gambling in the United States. By Gilbert Geis, Ph.D. Debates the questions of whether such acts should be brought under the jurisdiction of criminal law, whether they are socially harmful, and whether societal sanctions deter people. Publication No. (HSM) 72-9132. $1.50.

Mental Health and Learning: When Community Mental Health Centers and School Systems Collaborate. Spotlights the efforts of five CMHC's in developing their diverse strategies and preventive aspects in school-based mental health programs. DHEW Publication No. (HSM) 72-9146. $1.25.

Social Change and Human Behavior. Mental Health Challenges of the Seventies. Ten essays provide strategic perspectives on various behavioral aspects of human vulnerability and resourcefulness for survival, and suggestions for improving communications among the behavioral sciences relevant to mental health. DHEW Publication No. (HSM) 72-9122. $2.

Mental Health: Principles and Training Techniques in Nursing Home Care. Reports from a National Conference of the Gerontological Society and NIMH on plans for the development and retention of competent personnel in long-term care facilities for the elderly. DHEW Publication No. (HSM) 73-9046.

Erratum: The description for the *International Directory of Investigators in Psychopharmacology* which appeared in the December 1972 issue of the *Digest* should have read: This 439-page book, published jointly by NIMH and WHO, is not a "Who's Who" in psychopharmacology. It includes the names, addresses, affiliations, and major fields of interest of those who are actively or administratively involved in the investigation of psychotropic drugs for the treatment of mental illness. Indexes are arranged to alert researchers to ongoing work in other parts of the world as well as in their own country. DHEW Publication No. (HSM) 72-9091.

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